FINAL

Regional 1% Conservation Program

2001 Residential Programs

Evaluation Report

Volume 3: 2001 Residential Water Conservation Survey Results

Submitted to

SAVING WATER PARTNERSHIP
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January 2003

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EXECUTIVE SUMMARY

Study Background and Purposes

This is **Volume 3** of the *2001 Residential Programs Evaluation Report for the Regional 1% Water Conservation Program*. It presents data and findings from the 2001 Water Conservation Survey with residential customers.

Seattle Public Utilities (SPU) provides water to over 1.14 million people in the Seattle-King County area. A little under half (45%) of customers – mostly those living within the Seattle city limits – receive their water directly from SPU. The remaining 55% of customers receive water through twenty-six wholesale purveyors (Purveyors). SPU and its Purveyors have joined together in the **Saving Water Partnership** to foster long-term stewardship of water resources.

Over the years, SPU and its Purveyors have systematically conducted quantitative and qualitative market research with their residential customers to track various conservation and water resource indicators and to assess program efficacy. The purposes of the 2001 survey were to:

- Measure current perceptions, attitudes, and behaviors of residential customers toward water conservation, and, where feasible, to compare data over time
- Gather information about awareness of and participation in current conservation programs
- Gather insights about the effects of a regional drought alert in summer 2001, including short and longer-term changes in attitudes and behaviors
- Identify opportunities to improve conservation efforts

Findings of the *1999 Residential Water Conservation Survey* will serve as the baseline study against which many of the results of the current study will be compared.

Study Methods

Seattle Public Utilities and Purveyor utility staff worked closely with Dethman & Tangora LLC, a market research firm in Seattle, to design and conduct the research. Market Data Research Corporation in Tacoma pre-tested, collected, and processed the data. Telephone interviews were conducted during November and early December 2001. Interviews lasted about 15 minutes and were conducted using a computer assisted interviewing system. Data were analyzed using standard data reduction and statistical methods.

The randomly drawn, representative sample of residential customers provides adequate numbers for a separate analysis of Seattle and Purveyor customers, as well as reliable overall population estimates. The table below shows the sample sizes and margins of error for both the 1999 and 2001 residential conservation survey.

Table 1: Sample Sizes & Margins of Error for the 1999 and 2001 Surveys

	1999	Error Margin	2001	Error Margin
Overall	1223	+/- 2.9%	1035	+/- 3.2%
Seattle	603	+/- 4.1%	530	+/- 4.5%
Purveyor	620	+/- 4.1%	505	+/- 4.5%

Key Findings

Key population findings, as well as notable differences between Seattle and Purveyor customers, and comparisons to the 1999 baseline survey, are highlighted in this Executive Summary. Population percentages have been weighted to reflect Seattle/Purveyor population proportions. More detailed information can be found in the table of key findings at the end of this summary, in the main body of the report, and in Appendix. SPU also has the survey data in an electronic file.

Demographics and Household Characteristics

Sample demographics reveal that the 1999 and 2001 samples are very similar; each sample, when compared with U.S. Census statistics for 2000, reflects a slight under-representation of renters, minorities, and respondents below age 34, not unusual for telephone surveys.

- In 2001, as in 1999, most Saving Water Partnership customers are homeowners, living in single family homes, Caucasian, and at least 35 years of age, as these statistics show:
  - Three quarters (72%) are homeowners
    - Seattle customers are more likely to rent their homes
  - 77% live in single family homes.
    - Seattle customers more often live in multi-family homes (27% to 17%).
  - 61% live in 1 or 2 person households.
  - Three-quarters are (76%) are 35 years of age or older.
  - 82% are Caucasian.
    - Seattle has a slightly higher minority population than Purveyor areas.

- Income is more varied, and has risen slightly since 1999. Just over half (51%) of those reporting their incomes have annual family incomes between $25,000 and $75,000. Just less than a third (31%) have incomes above $75,000, and 18% having incomes below $25,000.
  - Purveyor customers have somewhat higher incomes.

- Two-thirds (68%) of those living in single family homes say their lots are 10,000 square feet or less.
  - Purveyor customers more often have yards and to live on larger lots.

General Attitudes and Behaviors about Water Conservation

- Customers continue to be concerned about water supply and conservation.
  - 63% of customers are very or somewhat concerned their communities will face major water supply problems in the next 5 years, due to shortages, finite water supplies, and population growth. Despite the drought alert in 2001, the level of concern did not change from 1999, but reasons for concern focused more on shortages than in 1999.
    - The unchanged level of concern may indicate customers are more accustomed to potential drought conditions. In a 1994 residential population survey, apprehensions about supply were notably higher following the 1992 drought.
- Customer beliefs that it is important to conserve water and that their actions can help solve water supply problems have generally intensified since 1999.
  - 94% believe it's important for their households to actively conserve water (58% very important, 36% somewhat important).
  - 89% of customers feel their individual actions can greatly affect (47%) or somewhat affect (42%) whether we have enough water.
- 88% of customers believe it's important for their water utility to provide conservation programs and of those, 87% are satisfied with utility conservation services.
  - Support for, and satisfaction with, conservation programs is somewhat stronger among Seattle customers.
- Consistent with their beliefs, 58% report they have reduced their use in the past year; of these, 46% of them say they have reduced their use a great deal (more than 10%) and another 36% say their reduction is between 5% and 10%.
  - Overall, three-quarters of customers feel they can save more water in their households; their estimates of how much they can save are just slightly less than in 1999. Thus, even though they have reduced use, they believe they can save more.

- Seattle customers feel they can save more than Purveyor customers.

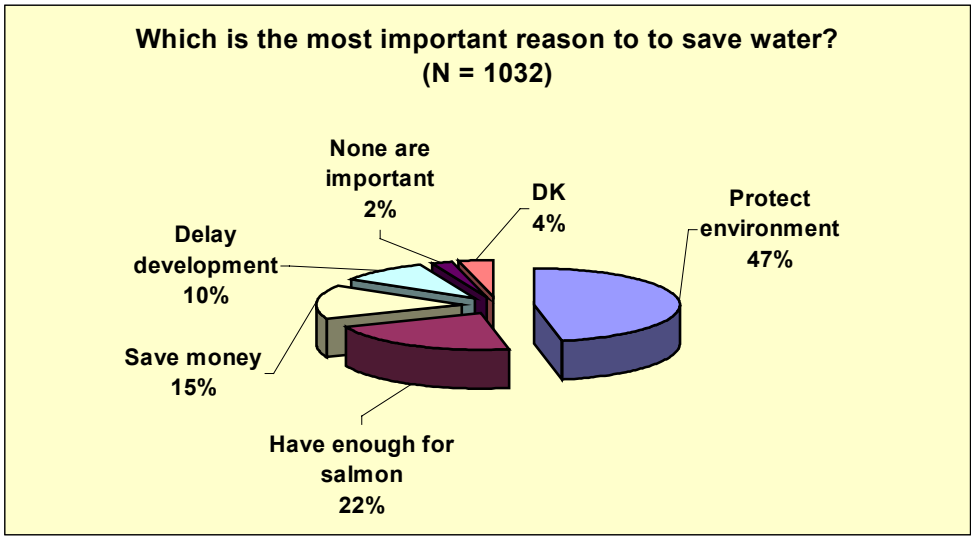
➢ Many customers believe conservation means both austerity **and** efficiency. An analysis comparing two groups – one that strongly agrees with both statements and one that strongly agrees with the efficiency statement but strongly disagrees with the austerity statement – suggest that holding both views strongly may result in stronger water conservation views and action. For instance, the importance of conserving, the amount conserved, support for and satisfaction with conservation programs, and concern for salmon are notably stronger among this group.

Motivations to Save Water

➢ As in 1999, protecting the environment continues to be rated as the strongest component in customer motivations to save water, but all four motivations listed below continue to have clout and ratings changed little:
- **Protect the environment** (63% very likely; stronger in Seattle)
- **Delaying the development of more costly supplies** (54% very likely)
- **Having enough water for people and salmon** (52% very likely)
- **Saving money on their water bills** (52% very likely)

➢ When asked to choose their single most important reason to conserve water, the environment and salmon were the strong leaders (see **Figure 1**), with "having enough water for salmon and people" doubling from 11% to 22%, and the general environmental motivation dropping from 61% to 47%.

Figure 1: Single Most Important Reason to Save Water



Indoor Water Use Characteristics and Behaviors

Faucets

- 79% of customers report they have used faucet use in the past two years.
- 36% report they have found faucet leaks and, of those, 91% say they have fixed the leaks.
- 41% of customers report they requested and received a household conservation kit containing two water conservation items: a faucet aerator and a plastic bag to measure faucet and shower flows.
  - 67% installed the faucet aerators and 33% measured their flow rate.

Showers

- 33% of customers report they take less than 5 minute showers; 48% report their shower times as 5-10 minutes; and 8% each say their showers are more than 10 minutes or that they vary in length.
  - Due to the scale changing in 2001, more people may have "admitted" to longer showers than in the 1999 survey.
  - Purveyor customers more often report shorter showers.

Toilets

- About a third (32%) of customers report having one toilet, while 37% have two, and 30% have three or more.
  - Purveyor customers have significantly more toilets than Seattle customers.
- 63% of customers report checking their toilets for leaks in the past two years.
  - In 1999, Seattle customers were less likely than Purveyor customers to check their toilets for leaks, but no differences were found in 2001.
  - 36% of customers report having found a leaky toilet, and of those, 95% say they have either fixed (75%) or replaced (21%) the toilet.
- 18% of households report they have replaced 1 or more toilets in the past two years; this rate of replacement appears to be higher than previously reported.
  - Just over half (55%) of customers have been very satisfied with their new toilets; this suggests that many customers have some complaints about their low-flow toilets.
  - 10% of customers are "very likely" to replace a toilet within two years.
  - Those who intend to replace their toilets most often say it's because they will remodel (41%), but 26% say it's because they want to save water.
  - 18% say they would very likely spend $100 to $200 to replace a working toilet with a low-flow model if they knew they could recoup the cost through lower bills within 2 years. This is the same percent as in 1999.
- 50% of customers report they generally flush the toilet with every use.
  - This is significantly reduced from the 60% "flush with every use" behavior reported in 1999.

- While Purveyor customers were significantly more likely to flush with every use in 1999, all customers were on a flushing par in 2001.

Clothes Washers and Dishwashers

- 66% of households report they **always** wash full loads of dishes and clothes.
- 77% of customers report they are aware of resource efficient washing machines, up significantly from 52% in 1999
- 20% of households say they have bought a new clothes washer in the past two years, and 61% of these customers believe they bought a resource efficient washer rather than a standard efficiency washer. Water and energy savings were primary reasons for consumers to buy high efficiency washers.
- Customers are most likely to get information about appliances from home improvement, hardware, or appliance stores (54%), books, magazines and newspaper articles (36%), the Internet (17%), and utilities (15%). Interestingly, the Internet use rose from 6% to 17% in just two years, and the utility use rose from 0% to 15% in that same time period.

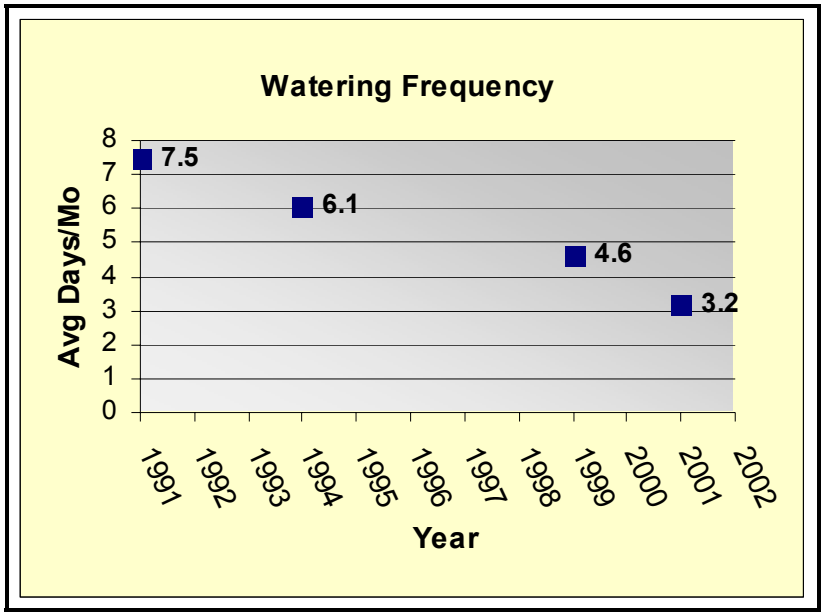
Outdoor Water Use Characteristics and Behaviors

- 71% of all customers have yards, while 29% do not.
  - The proportion of customers with yards has decreased from 77% to 71%, and this reduction appears to be mostly in Seattle.
  - Purveyor customers are significantly more likely to have yards (77%) than Seattle customers (64%).
- **Among those who have yards:**
  - Interest in gardening is high: 41% of these customers are very interested and 35% are somewhat interested.
  - 42% feel the garden areas are more important than the lawn areas, 14% feel the lawns is more important, and 39% think lawns and gardens are equally important.
  - Most (75%) maintain their own yards, but 23% use a service at least some of the time.
  - 51% add compost to their gardens (down from 66% in 1999)
  - 58% use mulch on their planting beds
  - 26% use a low-volume watering method
  - 84% know what is soaker hose is.
  - 11% have no lawn, 40% have less than half of their yard as lawn, and 48% have more than half of their yard in lawn.

- **Among those who have lawns:**

- 44% feel it's very or somewhat important to have a green lawn. This has not changed since 1999.
- 25% report they have removed some of their lawn in the past two years
  - Of these 25%, 27% said that saving water was a reason to remove part of their lawn.
- 51% report they watered their lawns less than once a month last summer, 14% watered twice a month, 17% twice a week, and 11% more often than once a week.
- Average lawn watering frequency has dropped by over half in the past decade: from 7.5 times per month in 1991 to 3.2 times per month in 2001, as shown in Figure 1A below:

Figure 1A: Reduction in Lawn Watering over Time



- Of those who water their lawns, 12 % report they use an automatic watering system (the drop from 21% in 1999 reflects the drought alert
  - Of those who have automatic systems, 56% say they adjust it according to the temperature and 75% say they have it inspected once a year.
  - 48% say they check for lawn thinning and thatch build-up

2001 Drought Behavior

Almost all customers – 91% -- were aware of the drought alert in Seattle and King County last summer. Water utilities encouraged the following behaviors to help stave off water shortages:

- Wash full loads of dishes and clothes
- Flush one less time per day
- Spend a minute less in the shower
- Use a car wash that recycles water
- Reduce outdoor lawn watering (includes watering early or late)

Table 2 (consistent with the findings presented in *Volume 1: 2001 Residential Programs Evaluation Results*) shows many customers reduced their water use in summer 2001, but the level of change, whether or not the change was related to the drought messages, and the likelihood of the changes persisting after one year, varied considerably by type of behavior. For instance, almost half of households increased the number of full loads of dishes and clothes that they washed, most increased this behavior due to the drought, and 4 of ten are likely to maintain the behavior.

Table 2: Response to Drought Alert Messages

Drought Behaviors (Sample sizes vary due to the incidence of eligible respondents – e.g., only respondents that water their lawns were asked about changes in watering.) During the past summer, did your household. . ..	**% HH Changing in Summer 2001**	**% HH Changing Due To Drought**	**% Persistence * After 1 Year**
Increase full loads of dishes/clothes (n = 172**)	47	41	42
Flush one less time/day (N = 1032)	46	32	36
Spend a minute less in the shower (N = 1032)	43	32	34
Use a car wash that recycles water	12	4	8
Water lawn less	Not Asked	62	33
Water lawn early/late	69	23	19

*The persistence level is the percent of survey respondents saying they changed their behavior for reasons other than the drought (assumed to be permanent changes), plus the percent of respondents saying they would very likely maintain their drought behavior after the drought was over.
**This question was added after most surveys were complete.

Water Conservation Program Awareness and Response

In addition to drought messages, some specific water conservation efforts took place, including the Toilet Round-Up Events, the WashWise program, and the Soaker Hose Rebate. Questions in the regional survey about these programs were limited, and the same questions were not asked about each program. (Note: A separate survey with participants was conducted for each program to

evaluate it. Those findings can be found in *2001 Residential Programs Evaluation Report Volume 2: Backup Reports and Data*). As shown in Table 3:

- Awareness of the two toilet rebate events was high (46%), indicating advertising and communications were effective.
- Among those buying a new washer in the past two years, about half (48%) were aware of the WashWise program and rebate (which has been offered for several years).
- Awareness of the Soaker Hose Rebate offer was 22% among customers with yards; this program began in 2001.

Table 3: Conservation Program Awareness

	Level of Awareness in Target Populations %
Toilet Round Up (N = 1032)	46
WashWise Program (n = 200)	48
Soaker Hose Rebate (n = 618)	22

Summary of Indicators

One of the major purposes of the regional surveys is to track changes in water conservation attitudes and behaviors over time. Table 4 lists positive indicators, negative indicators, and neutral or uncertain conservation indicators, and, if available, compares 2001 results to the 1999 baseline.

The percentages in the 2001 column reflect statistics for those who were asked each question. However, in some cases, it is also useful to project numbers to the whole population, even if they were not asked the question (e.g., the proportion of all respondents who think they reduced water use by 10%). These percentages are listed under "Population Statistics."

Overall, the large majority of indicators are positive and many gains have been made attitudinally and behaviorally. New data shows a great deal of support for conservation programs. While not shown on this table, response to the drought alert was strong; however, given that it was a drought alert year, positive findings may recede in the future even though efforts remain the same. Notably, some areas did not change, but it's difficult to know if this indicates stagnancy or stability. Finally, few truly negative indicators surfaced.

Table 4: Key Water Conservation Indicators from Regional Survey Data

	1999 Survey %	2001 Survey %	Whole Pop. Statistics %
Overall N*	**1223**	**1032**	**1032**
Positive Indicators			
Importance to actively conserve water			
Very Important	**49**	**58**	
Ability of individuals to affect supply			
Greatly affect/Make supplies last a lot longer	42	47	
Use compared to two years ago			
Use less than 2 years ago	NA	56	
If yes: 10%+ less	NA	42	23% of all HH
5-10% less	NA	36	20% of all HH
1-5% less	NA	18	10% of all HH
Support for utility conservation programs			
Very/Somewhat Important	NA	88	
Satisfaction with utility conservation programs			
Very/Somewhat	NA	87	
Motivations to save water			
Have enough for salmon	**11**	**22**	
Conservation means using "water more efficiently to enjoy the same things"	NA	83	
Proportion fixing leaky faucets if found	NA	91	
Awareness of Toilet Round-Up Events	NA	46	
Flushing with every use	60	50	
Awareness of resource efficient washers	53	77	
Use of utilities for appliance information	0	15	
Level of interest in gardening			
Very/Somewhat	NA	76	
Removed lawn	NA	25	
If removed, was saving water a reason	NA	27	7% with lawns
Frequency of lawn watering			
Never water (once a month or less)	**30**	**52**	
Water twice a month	24	14	
Once a week	24	17	
Every three days or more often	20	11	
How much more can you save? (stable but strong)			
A great deal/somewhat/a little more	76	73	
No more	21	24	
Areas of Stability or Uncertainty	**1999**	**2001**	
Importance of a green lawn			
Very important	16	15	
Somewhat important	30	29	
Not too/not at all important	55	55	

	1999 Survey	2001 Survey	Whole Pop. Statistics
	%	%	%
Overall N*	**1223**	**1032**	**1032**
Level of concern about water supply problems			
Very/somewhat concerned	62	63	
Toilets checked for leaks in past year/two years?			
Yes	64	63	
Likelihood to install low-flow toilet if payback certain			
Very likely	18	18	
Households with yards	77	71	
% of Lawn coverage			
No lawn	9	11	37 (no lawn + no yard)
Up to ¼ of yard area	20	20	
¼ to ½	24	20	
½ to ¾	26	29	
Over ¾ of yard area	18	19	
Negative Indicators			
Conservation means "giving up things I enjoy"	*NA*	44	
Add compost to beds	66	51	
****Ns may vary for each question***			

CHAPTER ONE – BACKGROUND, METHODS, AND DEMOGRAPHICS

Study Background and Purposes

Seattle Public Utilities (SPU) provides water to over one million people in the Seattle-King County area. A little under half (45%) of customers – mostly those living within the Seattle city limits – receive their water directly from SPU. The remaining 55% of customers receive water through twenty-six wholesale Purveyors. SPU and its Purveyors have joined together to form the Saving Water Partnership, a long-term effort to foster efficient use of water resources.

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Findings of the *1999 Residential Water Conservation Survey* will serve as a baseline study against which many of the results of the current study will be compared.

Study Methods

Approach

Seattle Public Utilities and Purveyor utility staff worked closely with Dethman & Tangora LLC, a market research firm in Seattle, to design and conduct the research. Dethman & Tangora also oversaw Market Data Research Corporation, a fielding firm in Tacoma, as it pre-tested, collected, and processed the data. Telephone interviews were conducted during November and early December 2001, a little over two years after fielding of the 1999 residential water conservation survey. Interviews lasted about 15 minutes and were conducted

using a computer assisted interviewing system. Data were analyzed using standard data reduction and statistical methods.

The randomly drawn, representative sample of residential customers provides adequate numbers for a separate analysis of Seattle and Purveyor customers, as well as reliable overall population estimates. The following margins of error and confidence intervals apply:

- **Overall Population Sample = 1035**. This sample has been weighted to reflect the population proportions of Seattle (45%) and Purveyor (55%) customers, and carries a + or – 3.2% margin of error at the 95% confidence level. The overall weighted sample is comprised of **1032** cases (rather than 1035).
- **Seattle Sample = 530.** The Seattle customer sample carries a + or – 4.5% margin of error at 95% confidence. (When weighted, the Seattle sample equals 466 cases.)
- **Purveyor Sample = 505.** The Purveyor customer sample carries a + or – 4.5% margin of error at 95% confidence. (When weighted, the Purveyor sample equals 566 cases.)

The methods used in the 2001 survey parallel those used in the 1999 baseline study 2001. While sample sizes were somewhat smaller in 2001, they produced only a small difference in the margins of error, as shown in the table below. Thus the samples are quite comparable as well as robust.

Table 5: Sample Sizes & Margins of Error for 1999 and 2001 Surveys

	1999	Error Margin	2001	Error Margin
Overall	1223	+/- 2.9%	1035	+/- 3.2%
Seattle	603	+/- 4.1%	530	+/- 4.5%
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Table and Figure Notes

Where possible, the report uses the survey question numbers and questions as report headings (although questions may be paraphrased to save space). Please refer to Appendix A for a full copy of the survey instrument. Three types of data may be presented for each question:

1. A pie chart that shows the weighted population proportions for 2001.
2. A table comparing weighted population proportions for 1999 and 2001.
3. A table comparing Seattle and Purveyor proportions for 1999 and 2001. These samples represent each group and are not weighted. If significant differences exist between Seattle and Purveyor customers, it is indicated by *Sig. = <.05*, meaning that there is less than a 5% chance that the

differences would occur by chance. If no significant differences were present, the table is labeled N.S. (Non-Significant).

Other cross-tabulations of interest may also be discussed in the text; these will use weighted data. Due to rounding, or to questions where multiple responses were allowed, total percentages may exceed 100%.

Demographic and Household Characteristics

Summary

Demographic and household characteristics of the population and Seattle and Purveyor households for both 1999 and 2001 are shown in **Table 6**. These findings show that demographic characteristics are similar across the two years.

A comparison of survey sample demographics to 2000 King County census demographics shows some differences. Results show that more respondents than county residents are home owners (72% compared to 60%), Caucasian (82% to 76%), older (21% are 65+ compared to 14%), and male (57% to 50%). Household size is very similar (2.58 people per household compared to 2.39 per household in the county). Income comparisons were not available. These types of differences in demographics are not unusual for telephone surveys; they reflect a population that is slightly more willing and able to respond to public opinions surveys.

Key demographic differences between Seattle and Purveyor customers include:

- Significantly more customers own their homes in Purveyor areas (77%) than in Seattle (67%). A similar pattern follows for single family versus multi-family dwellings.
- Lot sizes are significantly larger in Purveyor areas, where 31% of customers live on lots of ¼ acre or more, compared to 12% in Seattle. However, compared to the 1999 survey, more purveyors report living on smaller lots.
- Although the total proportion of non-Caucasian respondents is similar for Seattle and Purveyor populations, the distribution by ethnic group appears to differ slightly between the two groups (e.g., more Asians in Purveyor areas; more African Americans in Seattle). Some slight shifts may also have occurred between1999 to 2001 (e.g., fewer Asians in Seattle in 2001 than in 1999).
- Purveyor households are more likely than Seattle households to have incomes above $75,000, while Seattle households are more likely to have incomes of $25,000 or below.

Table 6: 1999 and 2001 Summary Table of Demographics

	1999			2001		
	Seattle %	Purveyor %	Overall %	Seattle %	Purveyor %	Overall %
Home Ownership vs. Renting *(Q53) Sig. = <.05*						
Own	68	80	75	67	77	72
Rent	31	19	24	31	22	26
Don't Know/Refused	1	1	1	2	1	2
Type of Dwelling *(Q51) Sig. = <.05*						
Single dwelling	74	82	78	72	81	77
Multi-dwelling	26	17	21	27	17	22
Don't Know/Refused	-	1	1	1	2	3
Lot Size *(Q52) Sig. = <.05*						
Small (< than 5,000 s.f.)	36	16	24	32	25	28
Average (5K to 10K s.f.)	49	39	43	43	38	40
¼ acre to ½ acre	10	24	18	8	18	13
More than ½ acre	2	17	11	4	13	9
Don't Know/Refused	3	4	4	12	7	9
Number in HH*(Q54) N.S.*						
1	28	16	22	29	18	23
2	38	40	39	38	38	38
3	17	18	17	16	17	17
4	10	15	13	8	16	12
5 or more	6	11	8	4	10	9
Don't Know/Refused	-	-	-	1	1	1
Average	*2.3*	*2.7*	*2.52*	*2.54*	*2.61*	*2.58*
Age *(Q55) N.S.*						
18-24	5	4	5	6	6	6
25-34	14	12	13	18	14	16
35-44	20	23	22	20	22	21
45-54	19	19	19	18	22	20
55-64	11	15	13	13	15	14
65 or older	28	24	26	22	19	21
Don't Know/Refused	2	2	2	3	2	2

	1999			2001		
	Seattle %	**Purveyor %**	**Overall %**	**Seattle %**	**Purveyor %**	**Overall %**
Ethnicity *(Q56) Sig. = <.05*						
Caucasian	82	84	83	81	83	82
Asian/Pacific Islander	7	3	5	4	6	5
African-American	3	2	2	3	0	2
Latino/Hispanic	2	2	2	1	1	1
Native American	1	1	1	1	1	1
Mixed ethnicity	na	na	na	2	4	3
Other	1	1	1	4	3	3
Don't Know/Refused	4	6	5	4	3	4
Household Income *(Q57) Sig. = <.05*						
Less than $15,000	8	3	5	7	6	7
$15,000 to $25,000	12	6	9	8	5	6
$25,000 to $50,000	23	21	22	20	18	19
$50,000 – $75,000	15	14	14	15	19	17
$75,000 - $100,000	8	11	9	9	13	11
Over $100,000	7	11	9	9	11	11
Don't Know/Refused	27	34	31	32	28	30
Gender *Sig. = <.05 for 1999;N.S. for 2001*						
Female	50	56	54	57	54	43
Male	50	44	46	43	46	57
Overall Ns =	*603*	*620*	*1223*	*530*	*505*	*1032*

CHAPTER TWO – CONSUMER VIEWS OF WATER SUPPLY & CONSERVATION

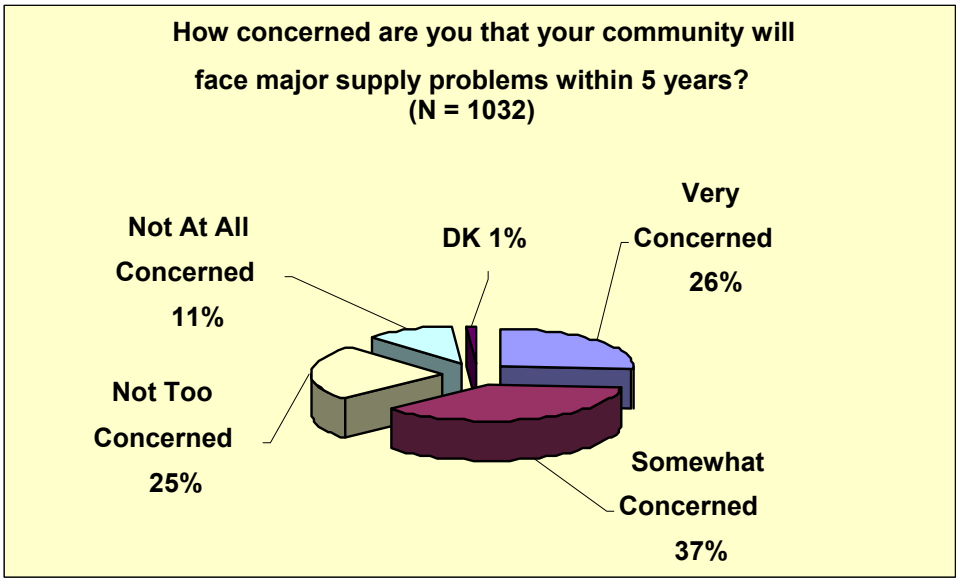
This chapter discusses a variety of awareness and attitudinal questions concerning water conservation. Many of the questions can be compared to the 1999 baseline results, but several are newly added to provide a better picture of customer beliefs, values, motivations, and behaviors. Questionnaire items, along with their numbers, are reproduced in italics; the full survey instrument can be found in Appendix A.

Concerns About Water Supply

Q1: How concerned are you that your community may face major water supply problems over the next five years?

As in the1999 survey, respondents in 2001 were first asked to rate their level of concern about water supply problems over the next five years. As shown in **Figure 2**, 63% of all respondents were very (26%) or somewhat (37%) concerned that supply problems would surface within five years, and the level of concern was similar for Seattle and Purveyor customers. Despite the drought alert conditions in 2001, the level of concern changed little between 1999 and 2001. More Seattle respondents in 2001 did report they were *very* concerned compared to 1999: this category increased from 22% to 29%.

Figure 2: 2001 Level of Concern About Water Supply Problems



Comparison to 1999 Baseline	1999 %	2001 %
Very concerned	24	26
Somewhat concerned	38	37
Not too concerned	23	25
Not at all concerned	13	11
DK	2	1
N =	*1223*	*1032*

	1999		2001	
Seattle-Purveyor Comparison – N.S. for 1999 & 2001	**Seattle %**	**Purveyor %**	**Seattle %**	**Purveyor %**
Very concerned	22	25	29	24
Somewhat concerned	42	36	36	38
Not too concerned	21	25	23	27
Not at all concerned	13	12	12	10
DK	2	2	2	1
N=	*603*	*620*	*530*	*505*

Q2: Why do you give that rating?

When asked for reasons behind their ratings of concern, public awareness of the drought alert was highly apparent, and far outstripped any other reasons for concern, as shown in **Table 7.** Thirty percent specifically mentioned drought conditions and another 12% were more generally concerned about limited supplies (*"we only have so much").* Seattle customers, compared to Purveyor customers, more often gave reasons related to drought.

Notably, only 13% gave shortage-related answers in 1999. In addition, the proportion that said water supply is just "not a problem" or that "there's enough water" dropped precipitously from 71% in 1999 to 26% in 2001. A few smaller changes occurred over time: concern about population growth, the environment, and rising rates all increased a little (more in Seattle), and concerns about health and water quality dropped from 10% to 5%.

Table 7 : Reasons for Concern or Lack of Concern About Water Supply

	1999	2001
Reasons for Concern	%	%
Finite water supply/shortages	13	42
Population growth/over-development	16	19
Good water is important/necessary	13	10
Health/general water quality	10	5
People don't care/conserve enough	6	5
Water management problems	6	3
Environmental/global issues/fish	3	8
Increased media coverage	3	5
Rising water rates	3	8
Terrorists could attack supply	0	3
Reasons Not to be Concerned		
There's enough water/not a problem	71	26
Never thought of, not informed	9	0
Trust the utilities/water system	2	3
Don't know	3	3
N=	*1198*	*1032*

Percentages total more than 100% due to multiple responses.

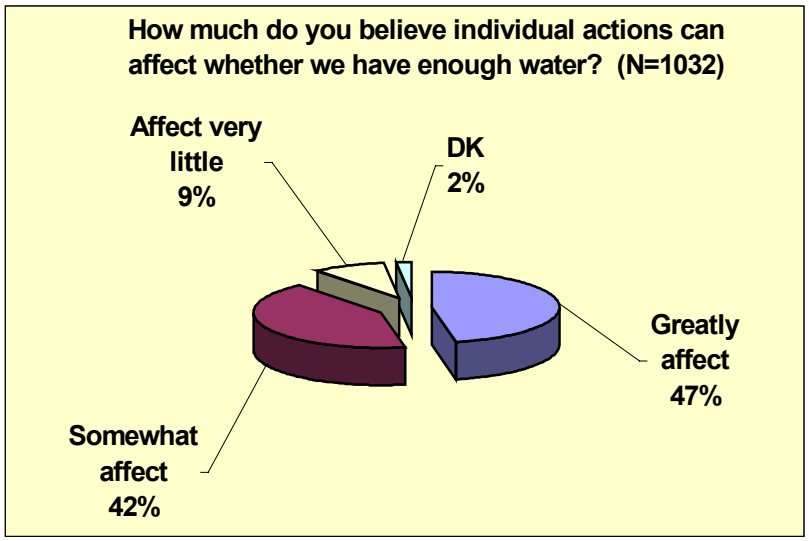
Individual Influence on the Adequacy of Supply

Q3: Do you believe individual households like yours can (1) greatly affect whether we have enough water to meet the future demands of our region; (2) somewhat affect if we have enough; or (3) have little effect on having enough?

Respondents were asked how much individual households could affect whether we have enough water. **Figure 3** shows that almost all customers (89%) think individuals can either greatly (47%) or somewhat (42%) affect how much water we have. Only 9% said their actions could have little effect.

Shifts have occurred in the past two years, as seen in the tables that follow Figure 3. While the proportion of customers who feel they can have little effect remained similar across the years, the proportion that feels they can *greatly* affect water supply has increased by 5%. The increase from "*somewhat"* to "*greatly"* occurred for both Seattle and Purveyor customers, but Seattleites (52%) are significantly more likely to feel they can greatly affect supply than Purveyor customers (43%), and the increase is greater across time as well.

Figure 3: Belief that Individual Actions Affect Adequacy of Supply



Comparison to 1999 Baseline	1999 %	2001 %
Greatly affect	42	47
Somewhat affect	45	42
Have little effect	10	9
DK	3	2
N=	*1223*	*1032*

	1999		2001	
Seattle-Purveyor Comparison N.S. for 1999 ; Sig. <.05 for 2001	**Seattle %**	**Purveyor %**	**Seattle %**	**Purveyor %**
Greatly affect	45	40	52	43
Somewhat affect	42	47	37	46
Affect very Little	10	10	10	9
DK	2	3	1	2
N =	*603*	*620*	*530*	*505*

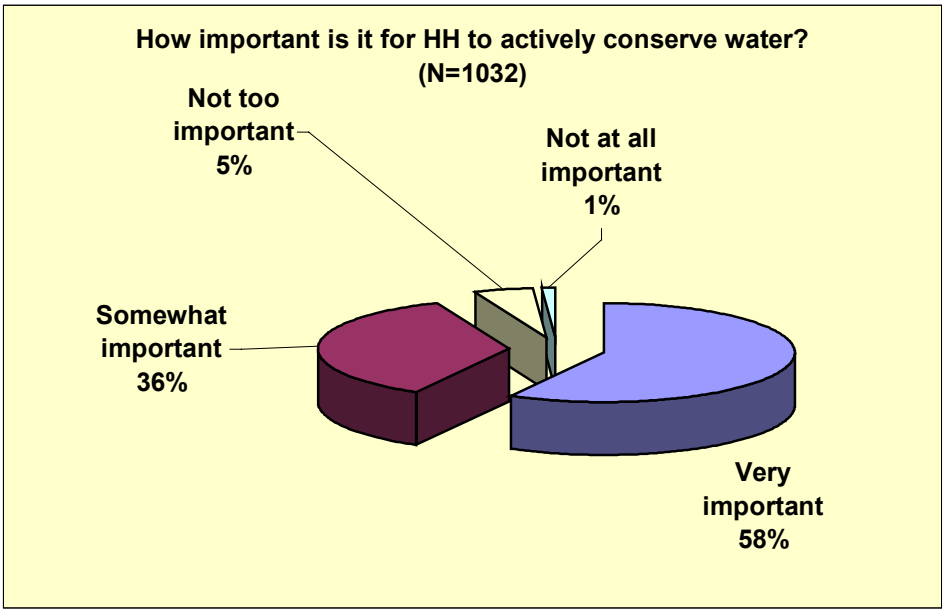
Views on Conservation and Reducing Use

Q4: How important is it for your household to actively conserve water?

As shown in **Figure 4** below, more than half (58%) of all respondents thought it was very important to conserve water and another 36% thought it was somewhat important, indicating the high value customers place on conservation. Only 6% thought conservation was not too (5%) or not at all (1%) important.

In just two years, the importance of saving water has risen noticeably. In 1999 49% said it was *very* important, but in 2001 the proportion is 58%. Seattle and Purveyor customers did not differ in their views for 2001, and their respective change over time is also similar.

Figure 4: Importance of Conserving Water *(Q4)*



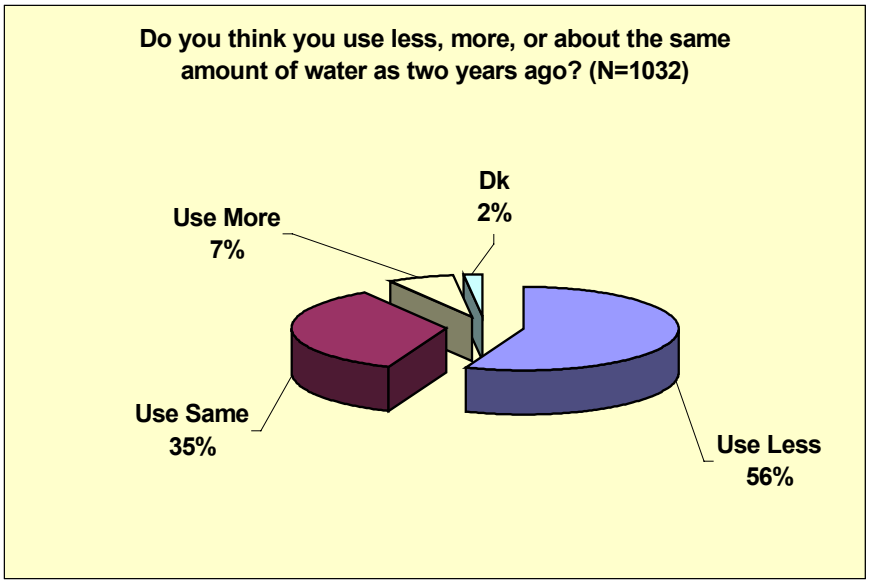
Comparison to 1999 Baseline	1999 %	2001 %
Very important	49	58
Somewhat important	42	36
Not too important	6	5
Not at all/DK	3	1
N=	*1223*	*1032*

Seattle-Purveyor Comparison N.S.		1999 Seattle %	1999 Purveyor %	2001 Seattle %	2001 Purveyor %
Very important		51	49	60	57
Somewhat important		41	43	33	38
Not too important		6	5	5	4
Not at all important		1	2	2	1
DK		1	0	0	0
	N=	*603*	*620*	*530*	*505*

Q5: Compared with the amount of water your household used two years ago, do you think you use less water now, use about the same, or use more? (New)

As shown in **Figure 5,** just over half of customers (56%) believe they are using less water now than they were two years ago; this is consistent with an overall downward trend in consumption that has occurred. No differences surfaced between Seattle and Purveyor groups. Question 5 was new to the 2001 Regional Survey, and thus cannot be compared over time.

Figure 5: Perceived Change in Use Compared to Two Years Ago

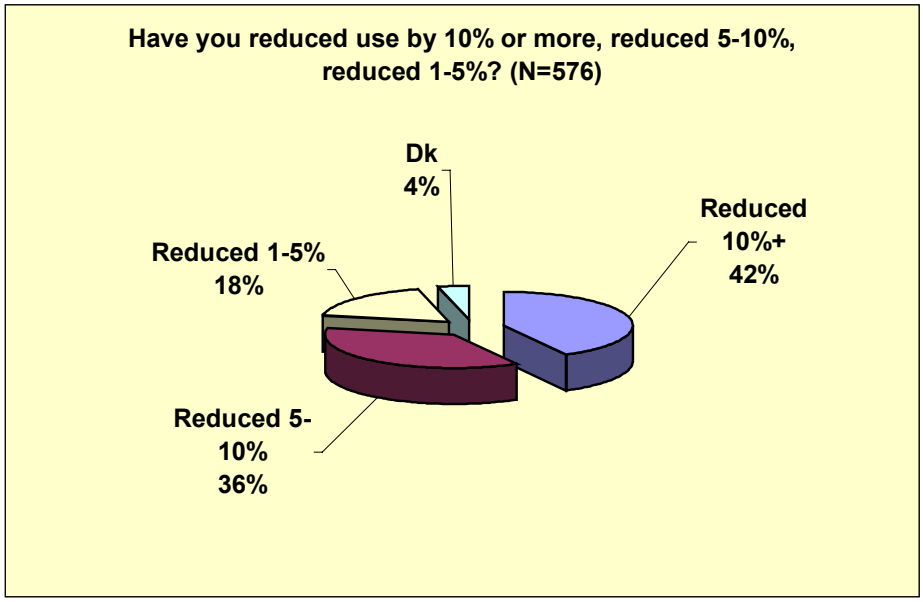


Seattle-Purveyor Comparison N.S.		Seattle %	Purveyor %
Use less		54	58
Use about the same		37	34
Use more		7	7
DK		2	1
	N=	*530*	*505*

Q6: (If reduced) Have you reduced your use by 10% or more, by 5 to 10%, or by 1 to 5%? (New)

When the 56% of customers that reported they have reduced their use over the past two years were asked to quantify their savings, 42% said they have cut their use by 10% or more (24% of all customers); 36% said they have reduced use by 5 to 10% (20% of all customers); and another 18% reported a 1 to 5% reduction (10% of all customers). Of those reducing their use, Purveyor customers are significantly more likely than Seattle customers to feel they have reduced their use 10% or more, 46% to 36%.

Figure 6: How Much Have You Reduced Your Use?



Seattle-Purveyor Comparison Sig. = <.05		Seattle %	Purveyor %
Reduced 10%+		36	46
Reduced 5-10%		37	36
Reduced 1-5%		21	16
DK		6	2
	N=	*284*	*292*

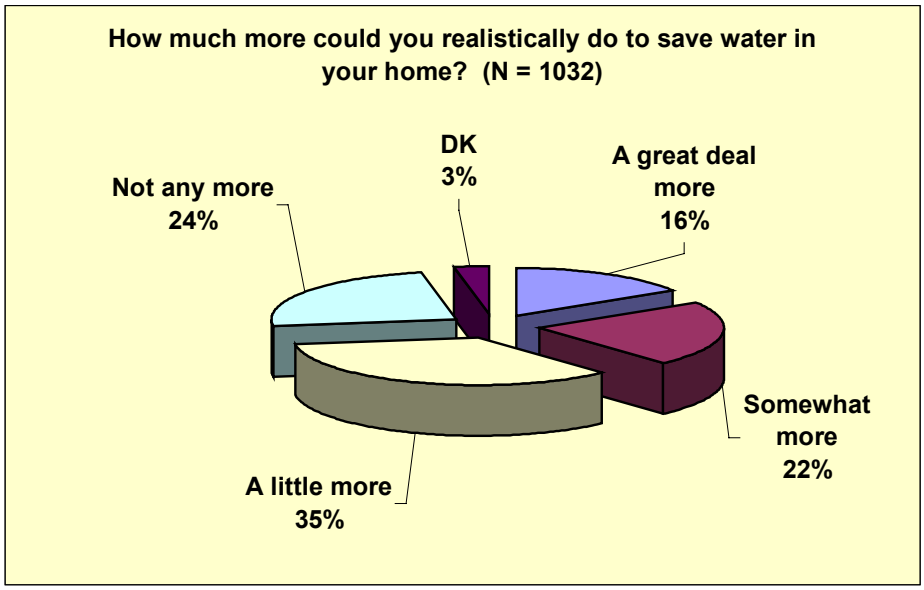
Q7. How much more could you realistically do to save water in your home?

When asked how much more they could realistically do to save water in their home, both outdoors and indoors (see **Figure 7)**, 16% said a great deal more (10% or more), and another 22% said somewhat more (5 to 10% more). About a third (35%) thought they could do a little more (1 to 5% more) and one in four (24%) said they could not save any more than they do now.

The numbers have changed since 1999, with fewer customers believing they can save 5% or more beyond what they have already saved (44% to 38%). Interpretation of this basic data is complicated. On the one hand, customers may have already saved and they are being realistic; other data in this study do show that many customers took steps to save water due to the 2001 drought alert, and many say they will persist in these efforts. On the other hand, customers may not be aware of all the opportunities to save.

As in 1999, Seattle customers are more likely to feel they could save more than Purveyor customers, but both groups show the overall downward trend.

Figure 7: How Much More Water Could You Save?



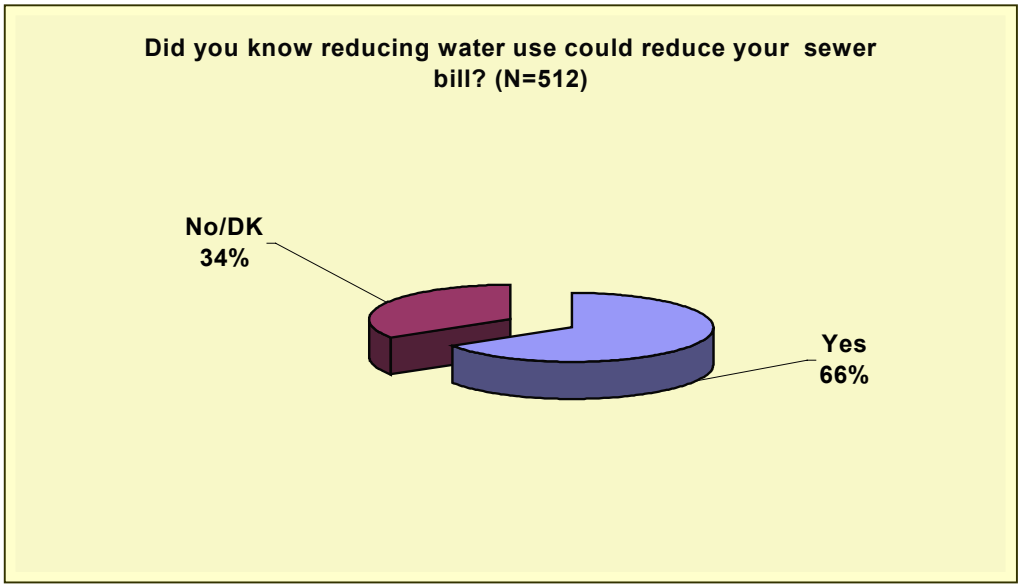
Comparison to 1999 Baseline	1999 %	2001 %
A great deal more	15	16
Somewhat more	29	22
A little more	32	35
Not any more	21	24
DK	3	3
N=	*1223*	*1032*

Seattle-Purveyor Comparison <.05	Sig. =	1999 Seattle %	1999 Purveyor %	2001 Seattle %	2001 Purveyor %
A great deal more		15	14	17	15
Somewhat more		30	28	24	21
A little more		30	34	29	38
Not any more		21	22	26	23
DK		4	1	4	3
	N=	*603*	*620*	*530*	*505*

Q7a: Did you know that if you reduce your water use that your sewer bill might also go down? (New)

Since this situation applies uniformly only to Seattle customers, Purveyor customers were not asked this question. These results point out that while the majority of Seattle customers (66%) do understand that water use and sewer bills are related, many customers (34%) still could benefit from that knowledge and the potential motivation to save.

Figure 8: Relation of Water Use to Sewer Bill



How strongly do you agree with:

Q7b "To me, conserving water at home means I will have to give up some things I enjoy." (New)

Q7c "To me, conserving water means I will need to use water more efficiently to enjoy the same things I do now." (New)

Questions 7b and 7c were designed to get at the strength of some underlying perceptions that people might hold about conservation that would lead them to resist it or embrace it. These questions explore how many respondents associate ***austerity*** with conservation (a more negative association) versus how many view conservation as greater **efficiency** (a more positive association).

Figure 9 shows that a substantial proportion of customers (44%) do associate austerity with conservation, and may not feel their lifestyle can be as rich and enjoyable if they have to conserve water. Still, only 16% strongly agree with the austerity statement.

Figure 10 shows that a much larger proportion of consumers (50%) strongly agree with the concept that conservation means efficiency and not austerity, and that 83% agree with the statement at least somewhat. No differences surfaced between Seattle and Purveyor customers for these questions.

Figure 9: Does conserving water mean "giving up things I enjoy?"

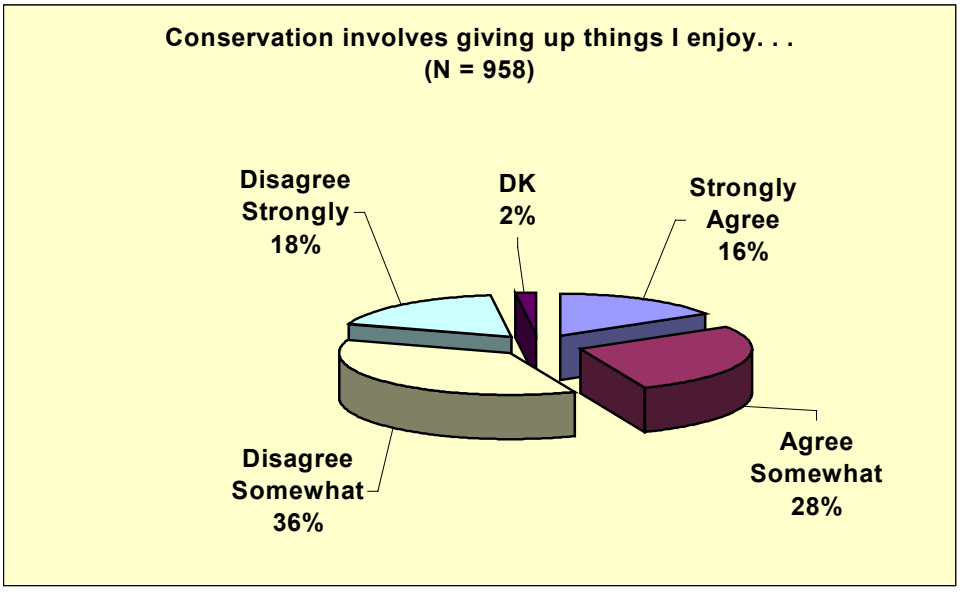
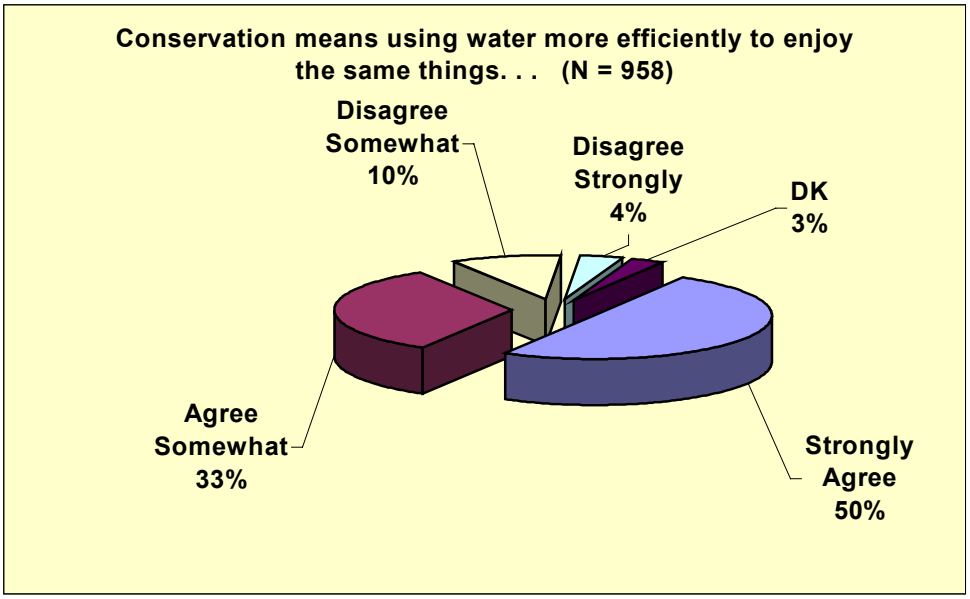


Figure 10: Does conserving mean being more efficient?



Efficiency appears to be the strongest association with efficiency, but austerity also plays a role for many people. Indeed, the two viewpoints are hardly mutually exclusive as **Table 8** shows. Of those who agreed that conservation means being more efficient (n = 774), half felt that conservation also means austerity, while other half did not. Of the smaller group who do not agree that conservation means efficiency (n = 131), only 30% agreed with the austerity notion and (70%) disagreed with both statements.

Table 8 : Efficiency and Austerity: Two Views of Conservation

		Conservation As Efficiency?	
		Agree	**Disagree**
Conservation as Austerity?			
	Agree	48%	30%
	Disagree	52%	70%
Total		774	131

The results are interesting and perhaps surprising when two groups with the strongest feelings are compared: those that strongly agree with both statements and those that strongly agree with the efficiency statement but strongly disagree with the austerity statement,. Findings suggest that respondents holding both views strongly are likely to have taken more conservation actions and have

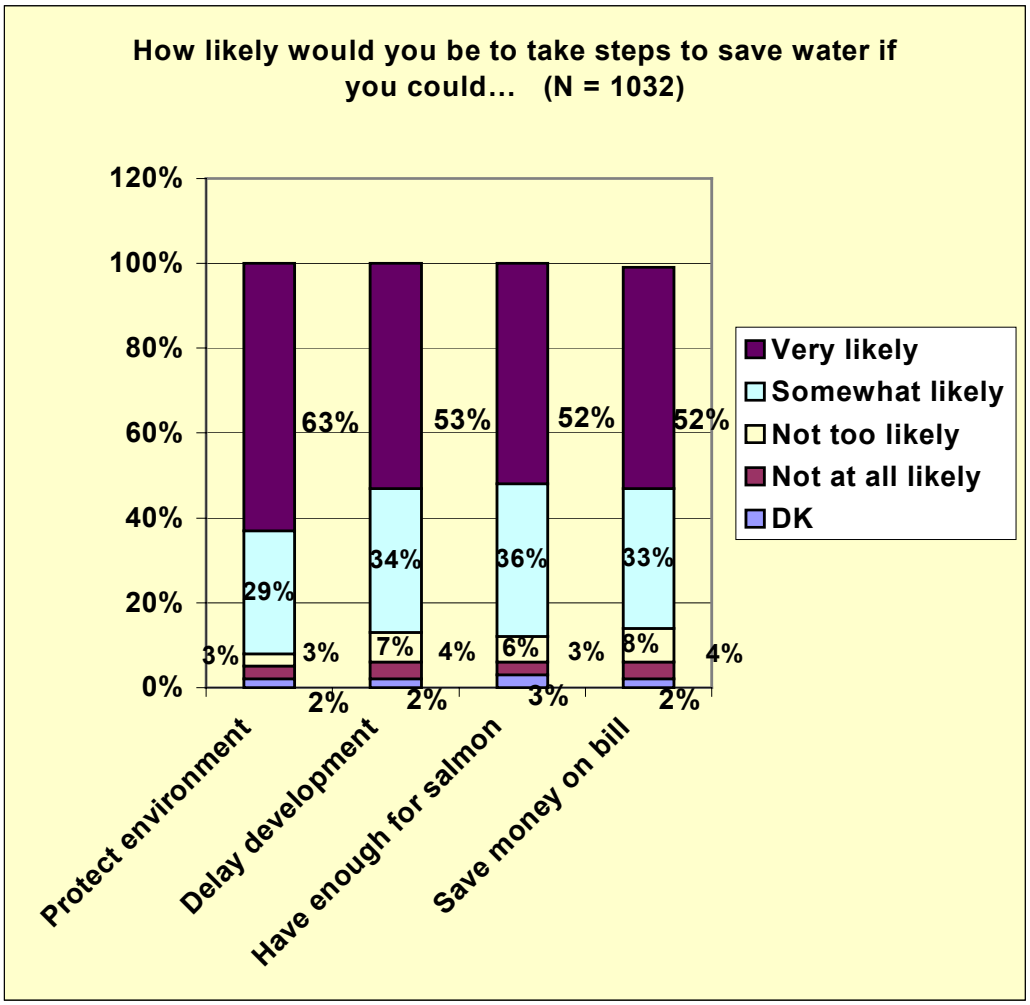
stronger conservation views. For instance, 63% of those who agree strongly with both statements say they reduced their use by 10% or more in the past 2 years, compared to 45% of efficiency but not austerity adherents. A similar pattern emerges in attitudes: those strongly agreeing strongly with both statements are more likely to believe in the importance of water conservation; are more concerned about water supply; show more support for and satisfaction with conservation programs; and express more concern for salmon.

How likely would you be to take steps to reduce your water use at home if you knew . . .
Q11. Both salmon and people would have enough?
Q12. You could save 5-10% on your water and sewer bills?
Q13. It would delay the need for new, costly water sources?
Q14. It would help protect our environment?

Respondents were asked the four questions above to gauge what would be most likely to motivate them to take steps to save water at home. As shown in **Figure 11,** all four reasons resonated very strongly with over half of respondents. Still, protecting the environment was the most compelling motivation (63% reported this reason was very likely to motivate them), with the others being rated almost identically. The ratings are very stable across between the baseline in 1999 and the 2001 results.

Between Seattle and Purveyor customers for 2001, one significant difference in motivations emerged: Seattle respondents were more likely to be very motivated by protecting the environment compared to Purveyor customers (67% to 60%). Compared to the baseline, some changes did occur between Seattle and Purveyor customers. In 1999, Seattleites were more likely to be motivated by salmon needs than Purveyor customers; however, the two groups are now equal. And, the "delay development" motivation dropped for both Seattle and Purveyor customers from 1999 to 2001.

Figure 11: Reasons to Take Steps to Save Water *(Q6-9)*



Comparison to 1999 Baseline	1999 %	2001 %
Protect Environment		
Very Likely	66	63
Somewhat Likely	26	29
Not Too Likely	3	3
Not At All Likely	3	3
DK	2	2
Delay Development		
Very Likely	60	54
Somewhat Likely	30	33
Not Too Likely	4	4
Not At All Likely	3	4
DK	3	2
Have Enough For Salmon		
Very Likely	55	52
Somewhat Likely	31	36

Comparison to 1999 Baseline	1999	2001
	%	%
Not Too Likely	6	6
Not At All Likely	5	3
DK	3	3
Save Money on Bill		
Very Likely	52	52
Somewhat Likely	32	33
Not Too Likely	7	8
Not At All Likely	4	4
DK	4	2
N=	*1223*	*1032*

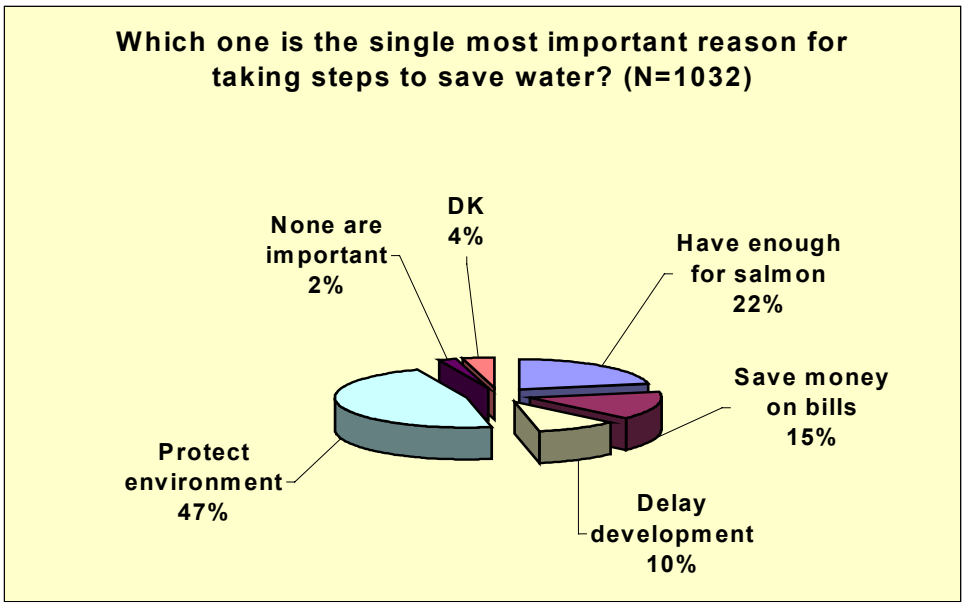
Seattle-Purveyor Comparisons	1999		2001	
Protect Environment. *N.S. in 1999; Sig. <.05 in 2001*	**Seattle**	**Purveyor**	**Seattle**	**Purveyor**
	%	%	%	%
Very likely	68	65	67	60
Somewhat likely	23	28	26	32
Not too likely	3	3	2	4
Not at all likely	2	3	3	2
DK	3	1	2	2
Delay Development *N.S.*				
Very likely	62	59	53	54
Somewhat likely	28	32	33	34
Not too likely	4	4	8	7
Not at all likely	3	4	4	3
DK	3	2	2	2
For Salmon Sig.=<.05 1999; N.S. 2001				
Very likely	58	52	51	52
Somewhat likely	31	32	27	36
Not too likely	4	7	6	6
Not at all likely	4	5	4	3
DK	3	3	2	4
Save Money *N.S.*				
Very likely	51	53	50	53
Somewhat likely	32	32	35	31
Not too likely	7	7	7	9
Not at all likely	3	4	5	4
DK	6	3	2	3
N=	*603*	*620*	*530*	*5 05*

Q15. Which is the single most important reason you would take steps to save water?

When respondents had to select the single most important reason for taking steps to save water at home (see **Figure 12**), the largest proportion of respondents (47%) selected protecting the environment as the most important reason, with other reasons garnering substantially less. Yet a substantial shift occurred between 1999 and 2001: salmon concerns gained considerable ground,

from 11% choosing it in 1999 to 22% choosing it in 2001, while the general environmental reason decreased in impact. Still, together, the environmental reasons outflank any others. Seattle customers favor environmental reasons more than Purveyor customers do in 2001, while this was not true in 1999.

Figure 12: Single Most Important Reason to Save Water (Q10)



Comparison to 1999 Baseline		1999 %	2001 %
Protect environment		61	47
Enough for Salmon		11	22
Save money on bills		15	15
Delay development		10	10
None		1	2
DK		2	4
	N	1223	1032

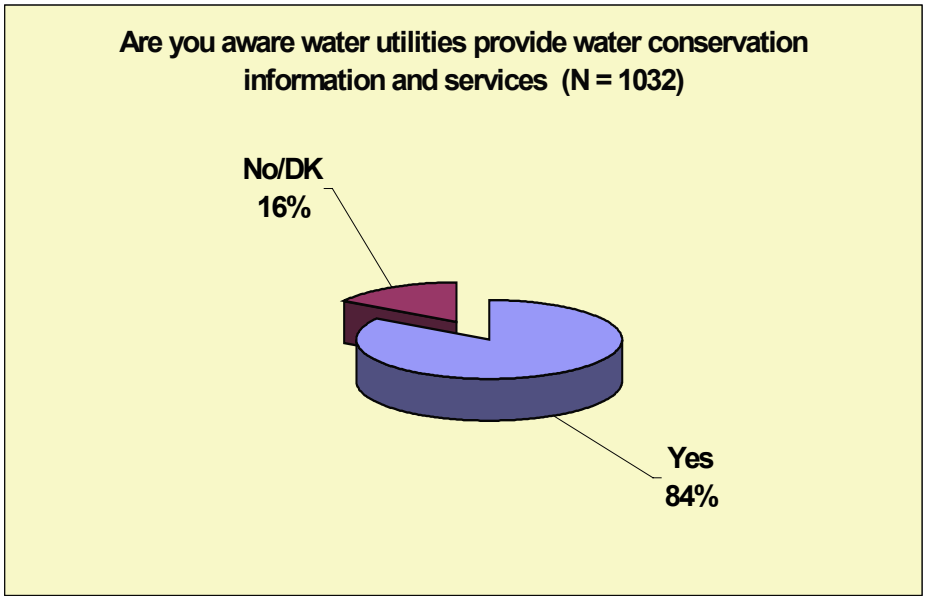
Seattle-Purveyor Comparisons	1999			2001	
Comparison-single most N.S. in 1999; Sig. = <.05 in 2001	Seattle	%	Purveyor %	Seattle %	Purveyor %
Enough for Salmon	12		10	20	24
Protect Environment	62		61	52	42
Save Money	13		16	13	16
Delay development	10		9	8	11
None	1		1	2	2
DK	2		2	4	4
N=	*603*		*620*	*530*	*505*

Awareness and Support of Conservation Services

Q8: Are you aware local utilities provide water conservation information and services? (New)

As shown in **Figure 13,** the vast majority of customers (84%) do know that their local water utilities provide water conservation and services to customers; the level of awareness does not differ across Seattle and Purveyor customers.

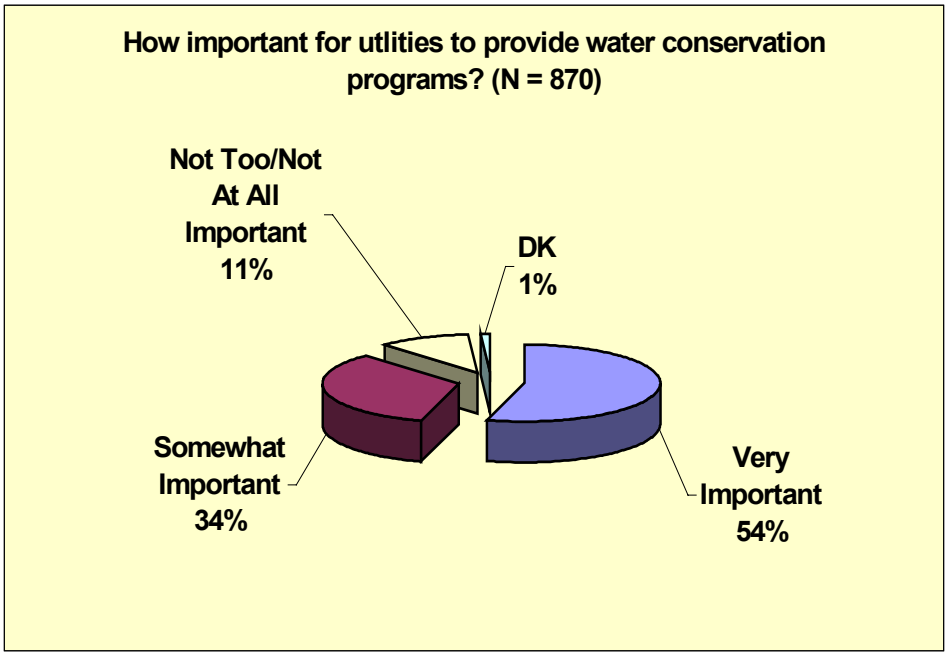
Figure 13: Awareness That Utilities Provide Conservation Services



Q9: How important is it for water utilities to provide conservation services? (New)

This question was added to assess public support for utility conservation outreach and assistance. Support is strong for these programs: 55% of customers feel they are very important, and 34% say they are somewhat important. Support is stronger among Seattle customers, with 58% of them saying *very* important compared to 51% of Purveyor customers.

Figure 14: Level of Support for Water Conservation Programs

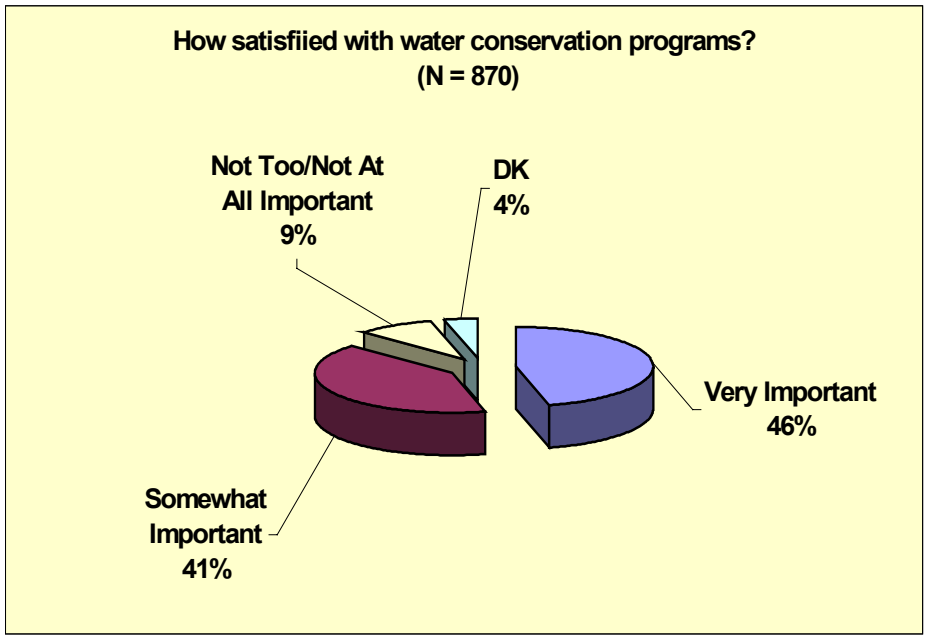


Seattle-Purveyor Comparison Sig. = <.05	Seattle %	Purveyor %
Very Important	58	51
Somewhat Important	30	38
Not Too/Not At All Important	10	9
DK	1	0
N=	*437*	*433*

Q10: How satisfied are you with your water utility's water conservation services? (New)

Not surprisingly, satisfaction with utility water conservation is also high, with 46% saying they are very satisfied, and another 41% saying they are somewhat satisfied, as shown in **Figure 15**. Again, Seattle customers give somewhat higher satisfaction ratings.

Figure 15: Level of Satisfaction with Utility Conservation Programs



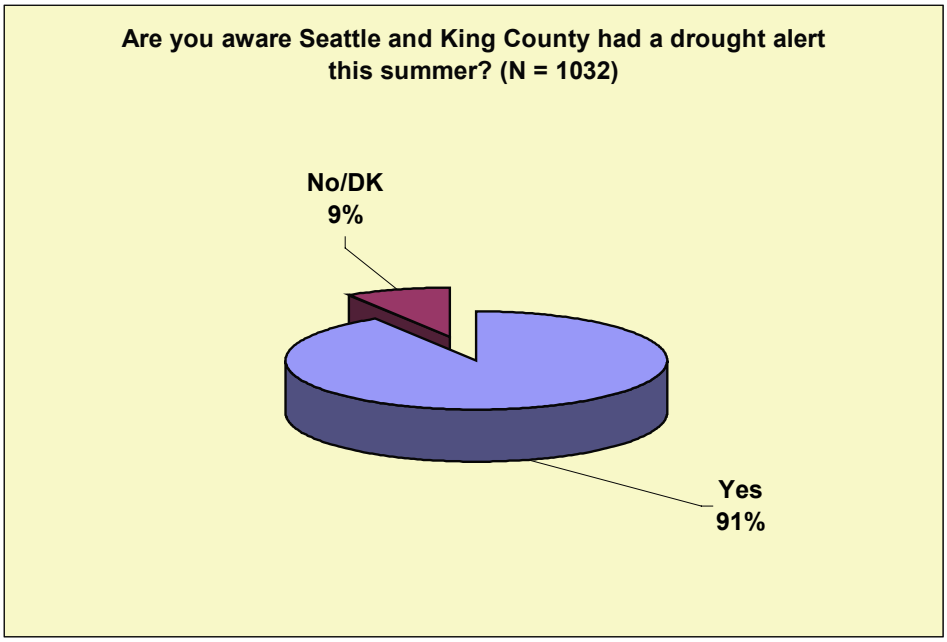
Seattle-Purveyor Comparison Sig. = <.05	Seattle %	Purveyor %
Very Satisfied	48	44
Somewhat Satisfied	36	45
Not Too/Not At All Satisfied	10	8
DK	5	3
N=	*437*	*433*

Awareness of 2001 Drought Alert

Q16: Are you aware Seattle and King County had a drought alert this summer?

To set the stage for understanding the results to future questions in the survey, all respondents were asked if they had been aware of a regional drought alert in the summer of 2001. As shown in **Figure 16** below, 91% of all respondents did know of the drought. No differences surfaced between Seattle and Purveyor customers.

Figure 16: Level of Awareness of Drought Alert



CHAPTER THREE – INDOOR WATER USE

This chapter discusses how consumers are thinking about and using water indoors. It presents data from new questions and data from repeat questions that are tracked against the 1999 baseline survey. It also presents data about:

- consumer response to utility efforts to encourage long-term reduction in use; and
- consumer response to utility efforts created to cut use due to the drought alert, including three messages to reduce use during the drought alert:
  - Spend a minute less in the shower
  - Flush one less time per day
  - Wash full loads of dishes and clothes

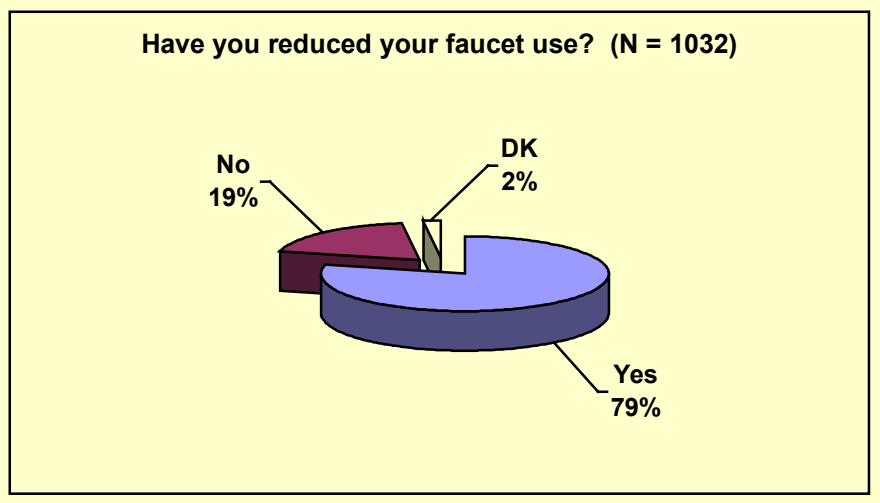
As in the previous chapter, the narrative reflects the questions in the survey instrument.

Faucet Use

Q17: During the past two years have you reduced your water use by using your faucets less? (New)

As shown in **Figure 17**, the large majority of respondents report they have used their faucets less in the past two years by doing such things as turning off the faucet more when brushing teeth or shaving, or when doing the dishes. No differences emerged between Seattle and Purveyor customers.

Figure 17: Proportion of HH with Reduced Faucet Use in Past Two Years



Q18: In the past two years, have you found any leaks in your faucets?(New)
Q19: Have you had a chance to fix the leaks? (New)

As **Figure 18** shows, a substantial proportion of customers report they have found leaks in their faucets over the past two years (36%). Most (91%) report they have repaired those leaks (see **Figure 19).** Seattle and Purveyor customers did not differ.

Figure 18: Proportion of HH with Faucet Leaks in Past Two Years

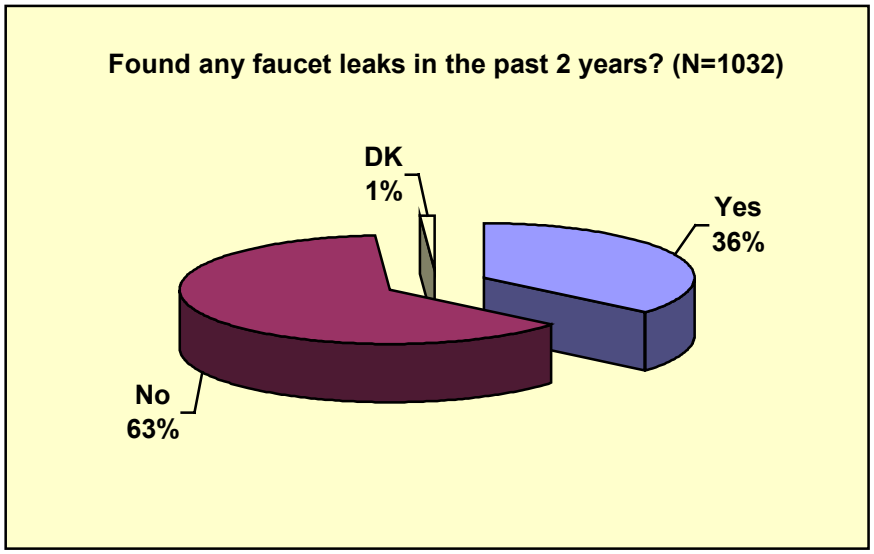
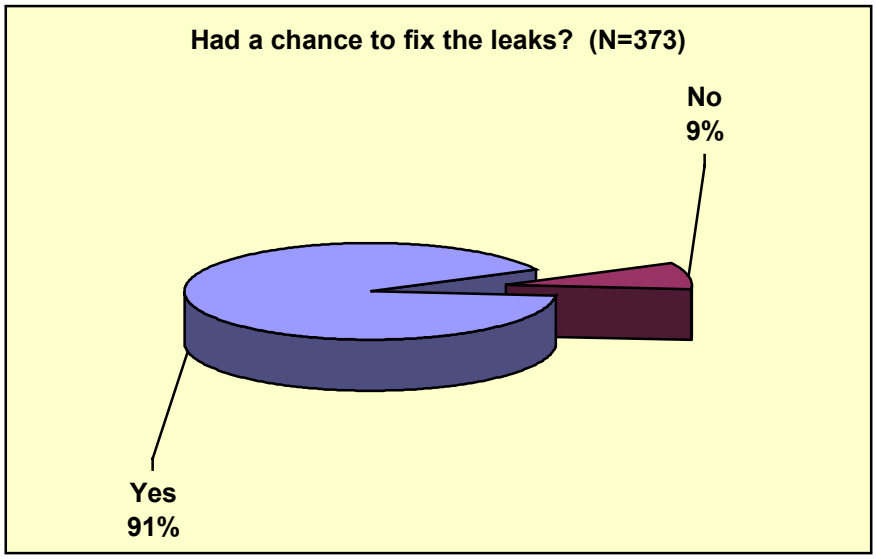


Figure 19: Proportion of Leaks Fixed



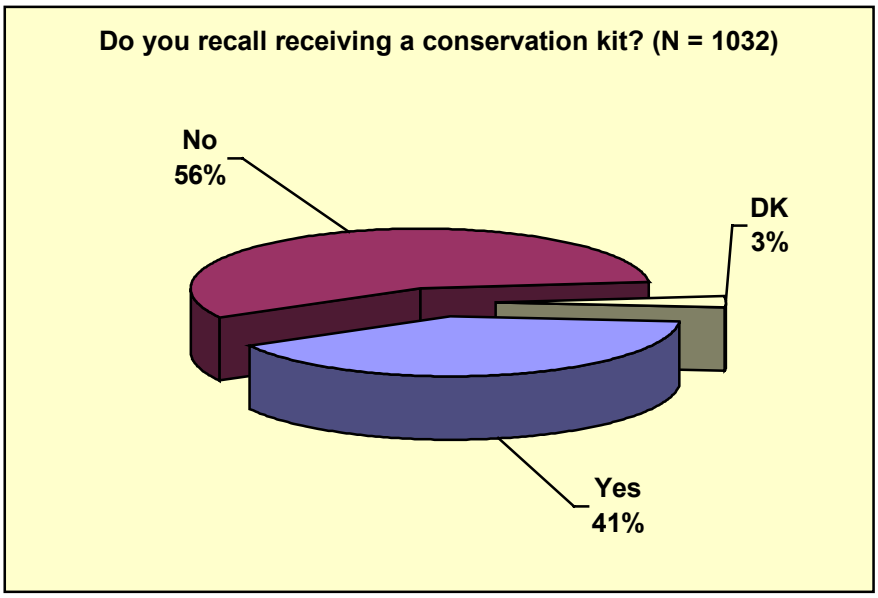
Conservation Kit Program

Q20: Do you recall receiving a Conservation Kit? (New)
Q21: Did you install the faucet aerator? (New)
Q22: Did you check water flow rates with the plastic bag? (New)

During the spring of 2001, two regional electric utilities – Seattle City Light and Puget Sound Energy – joined forces to offer a "Conservation Kit" to area consumers. The kit was offered to all City Light customers and about 20% of Purveyor customers. While this kit focused primarily on energy saving measures (e.g., a compact fluorescent bulb) and tips, it also included a faucet aerator and a plastic bag to measure faucet and shower flows.

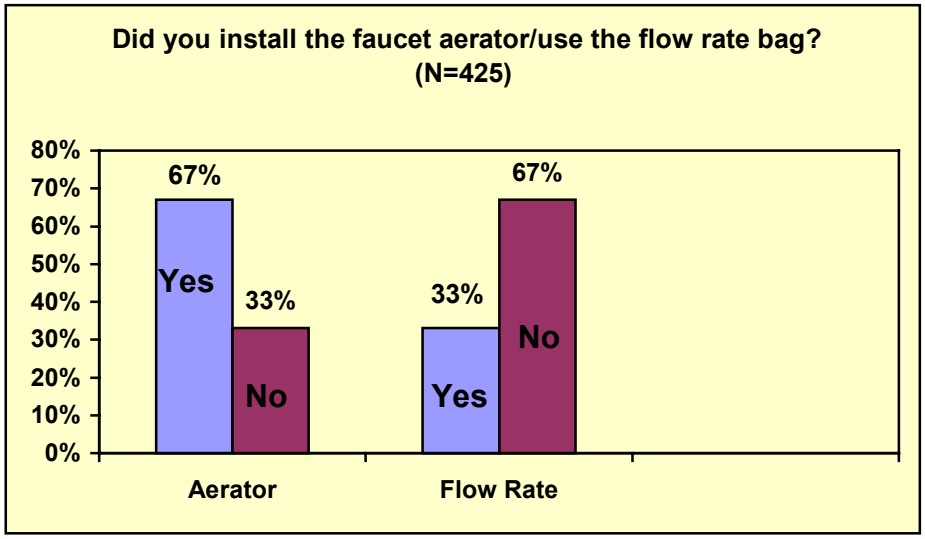
Figure 20 shows that 41% of customers overall remember receiving the Conservation Kit; this is consistent with utility tracked response. Regional survey figures show that 54% of Seattle customers recalled receiving the kit; this is also consistent with the 56% response rate tracked by Seattle City Light. However, we do not have a good figure from this survey for the response in the Purveyor areas because the solicitation rate was so much lower.

Figure 20: Proportion of HH Receiving Conservation Kit



Customers who received the kits were much more likely to install the aerator than to try to flow bag (67% to 33%, **Figure 21**). In this case, we can compare Seattle and Purveyor customers because each group is made up of those who said they received the kit. Seattle customers were more likely than Purveyor customers to install the aerator (71% to 62%). However, both groups likely overestimated their installation rate. A City Light survey of about 600 participants in their program showed 52% installed and left in their aerators (while 16% more put the aerator in but later removed it). About a third of both Seattle and Purveyor customers were likely to do the flow rate testing, but again may have overestimated their use, since the City Light survey showed that 20% used the flow bag.

Figure 21: Proportion Installing Aerators and Checking Flow Rates



Seattle-Purveyor Comparison *Sig.=<.05*		Seattle %	Purveyor %
Installed Aerator		71	62
Did Not Install Aerator		29	37
DK		0	1
	N=	*288*	*153*

City Light's participant survey shed further light on users of the water elements of the Conservation Kit:

- Most installed the aerator in the bathroom (63%), with 35% choosing the kitchen faucet.
- Most (70%) were satisfied with the aerator they received.
- A large majority (79%) said they would have used a second faucet aerator if it would have been provided.
- About half reported they had no problems with the aerator, but 18% found it did not fit on the faucet, 13% didn't like the spray patterns, and 10% each

said they didn't want to change their old aerator or that they just hadn't gotten around to installing it.

- Of the 20% using the flow-rate bag, 17% reported that their showerhead was not efficient; 47% of this group reported they changed their showerhead due to the test results.

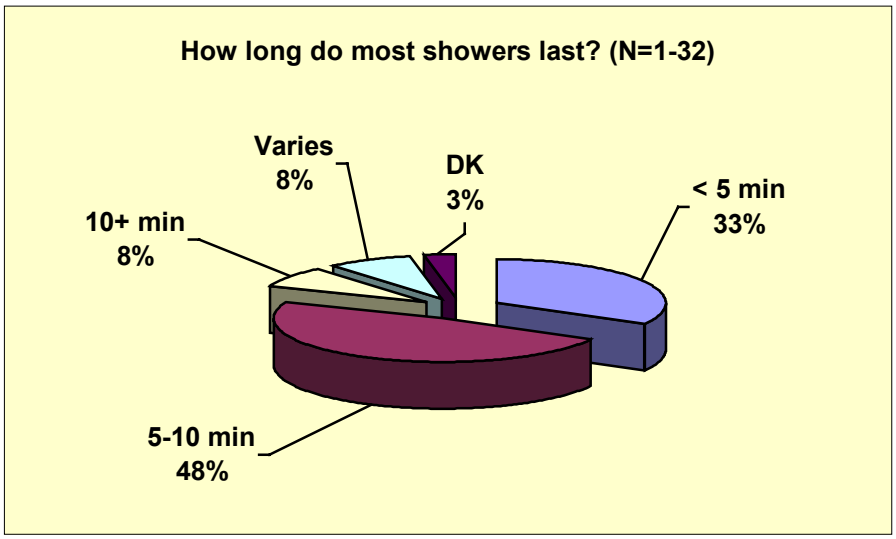
Showers

Q23: Do most showers in your household last less than 5 minutes, 5-10 minutes, or more than 10 minutes? (New Answer Categories)

Self-reports of shower length need to be taken as perceptions, rather than as factual data; however, across time, there is value in tracking these perceptions. In an effort to provide more varied, and hopefully accurate categories, the 2001 question on showering broke responses into less than five minutes, 5-10 minutes, 10+ minutes, and "it varies."

While these category changes created some lack of comparison with the 1999 data, it appears people may have been more thoughtful in their answers (see **Figure 22**). Fewer put themselves in the lowest category (less than five minutes), and notable minorities chose the "more than 10 minute" and "it varies" categories (8% apiece). Those in Seattle report they take slightly longer showers than those in Purveyor territories, although the opposite was true in 1999.

Figure 22: Length of Showers



Comparison to 1999 Baseline	1999	2001

		%	%
5 minutes or less/< 5 minutes		52	33
More than 5 min/ 5-10 minutes		44	48
More than 10 minutes		N/A	8
It varies		N/A	8
	N=	*1223*	*1032*

	1999		2001	
Seattle-Purveyor Comparison ***Sig. = <.05***	**Seattle** **%**	**Purveyor** **%**	**Seattle** **%**	**Purveyor** **%**
5 minutes or less/< 5 minutes	54	51	31	35
More than 5 min/ 5-10 minutes	40	47	55	57
More than 10 minutes	N/A	N/A	11	5
It varies	N/A	N/A	4	2
N=	*603*	*620*	*530*	*505*

Q24: During the past summer, did you regularly shorter your shower time by one minute or more? Q25: Did you shorten your showers due to the drought alert? Q26: How many people in your household shortened their shower times? Q27: Will you continue to take shorter showers?

Customers were asked to take shorter showers (at least one minute less per shower) in response to the drought alert. As shown in **Figures 23 and 24,** 43% overall say they shortened their showers last summer, and of those, 74% say they shortened their showering time due to the drought alert. This is equal to 32% of the overall population saying they changed behavior due to the drought alert.

Figure 23: Proportion of HH Taking Shorter Showers Last Summer

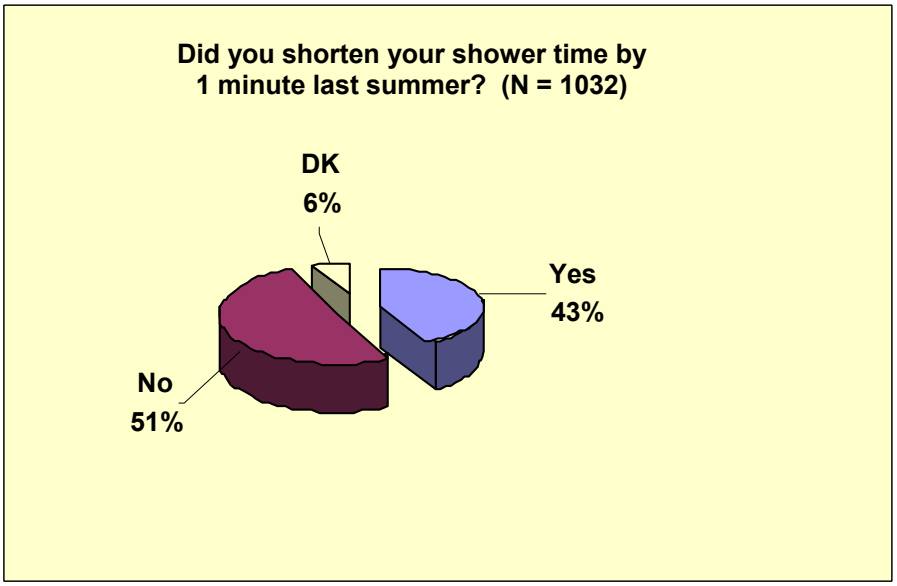
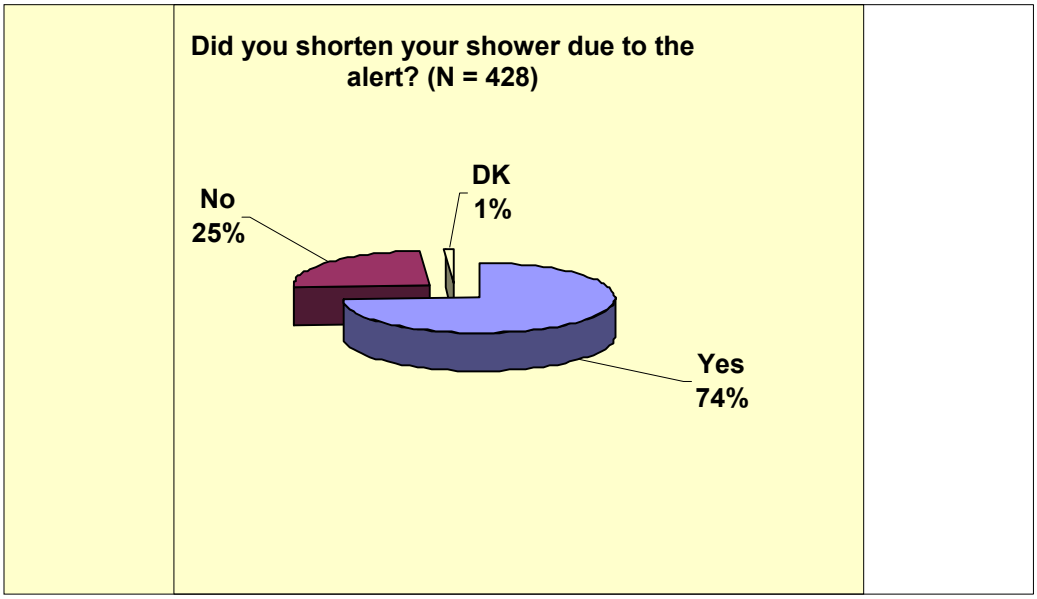
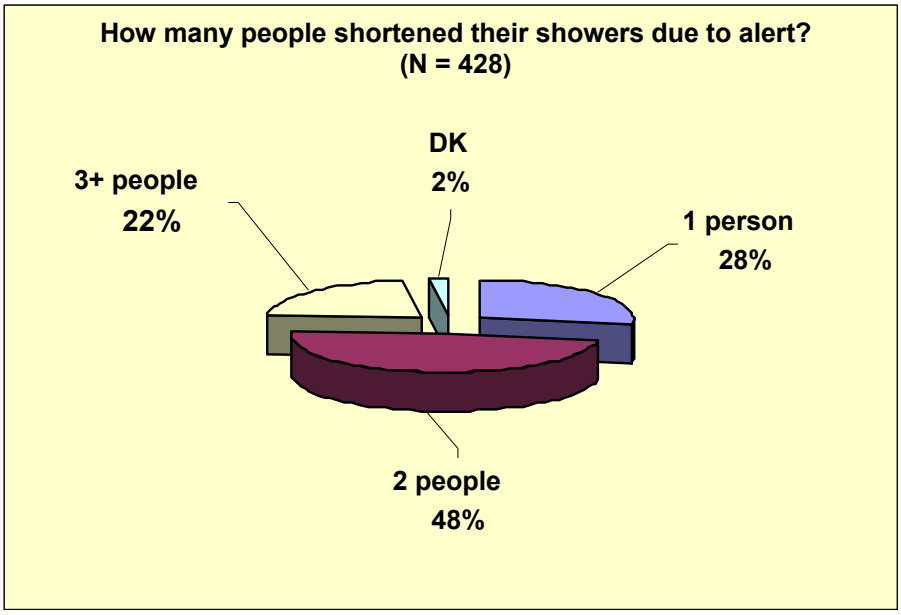


Figure 24: Proportion of Shorter Showers Due to Drought Alert



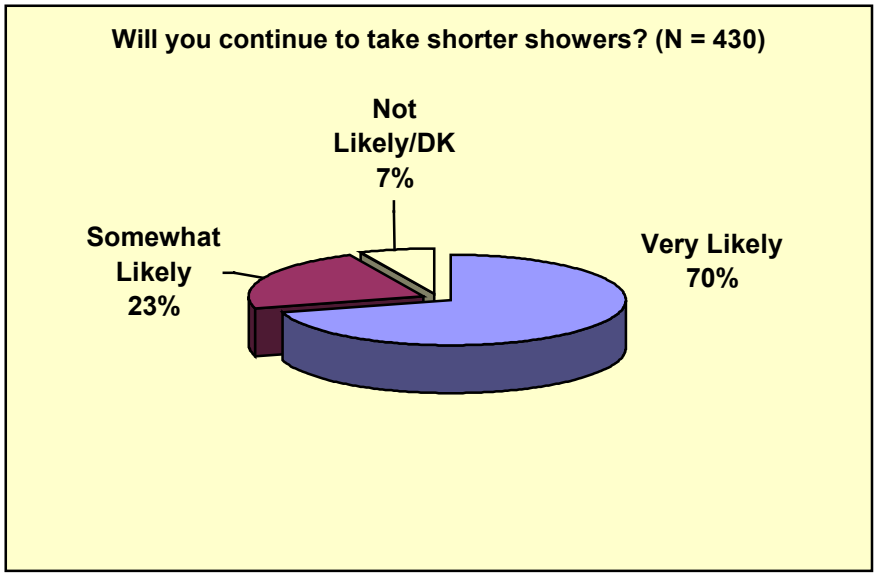
In households where shorter showers were taken, just under a third (28%) reported that one person had been taking shorter showers, while almost half (48%) reported two people were taking shorter showers, and 22% reported that 3 or more people were taking shorter showers (see **Figure 25**). Purveyor households were more likely to report more people shortening their showers, which corresponds with larger household sizes in these areas.

Figure 25: Number of People in HH Taking Shorter Showers



When those who shortened their showers due to the drought were asked if they would continue to take shorter showers, a substantial majority – 70% -- said they intended to do so (70% very likely, as shown in **Figure 26**). Cross-tabulations show that as shower time increases, persistence levels go down, suggesting that those who cut back from longer showers are more likely to see it as a short term change.

Figure 26: Persistence of Shorter Showers After the Drought Alert

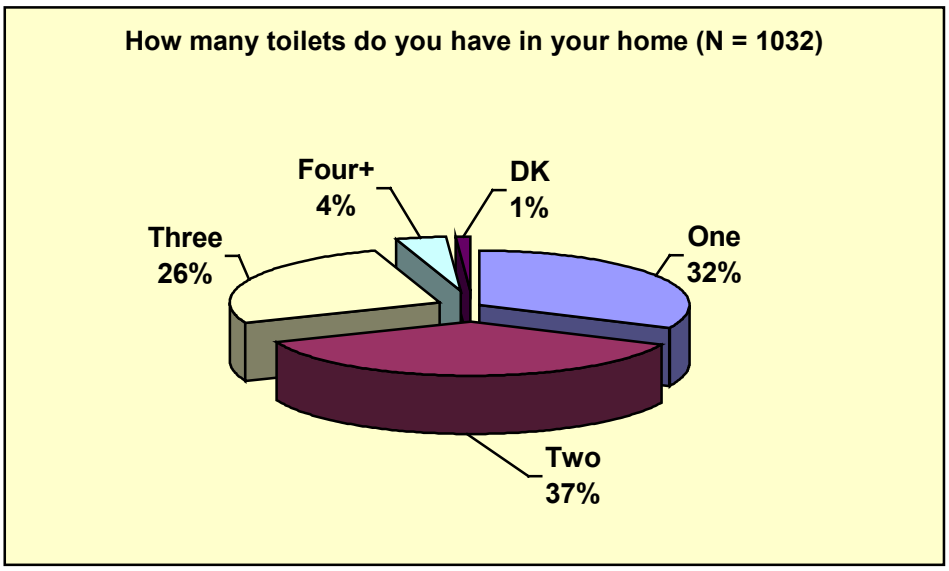


Toilets

Q28. How many toilets do you have in your home?

As shown in **Figure 27**, one-third (32%) of all respondents have one toilet in their home. Another 37% have 2 toilets, 26% have 3 toilets, and 4% have 4 or more toilets. Overall, the trend may be toward more toilets per households, but the trend is not clear. As in 1999, significant differences appear between Seattle and Purveyor samples, with Seattle customers more likely to have one toilet, and Purveyor customers more likely to have three or more toilets. 37% of respondents in both groups have two toilets.

Figure 27: Number of Toilets In Homes



Comparison to 1999 Baseline	1999	2001
	%	%
1 toilet	35	32
2 toilets	37	37
3 toilets	25	26
4 toilets	3	4
DK	N/A	1
N=	*1223*	*1032*

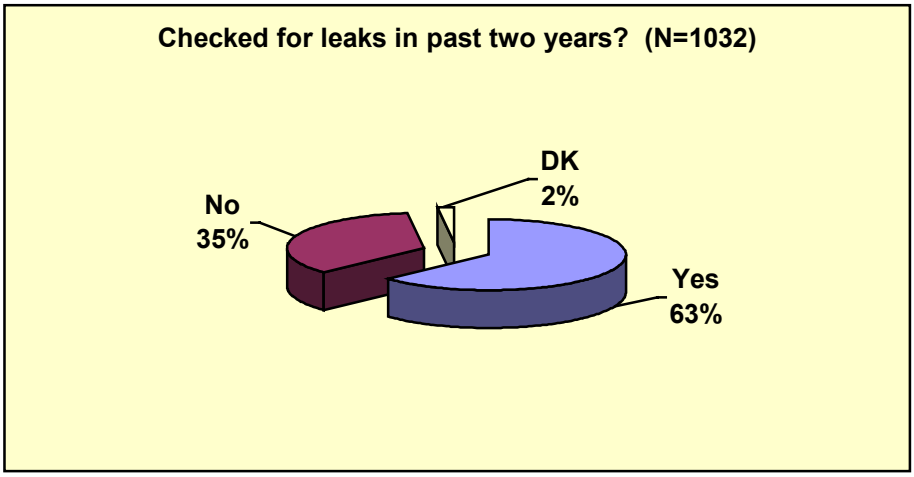
	1999		2001	
Seattle-Purveyor Comparison *Sig. = <.05*	**Seattle %**	**Purveyor %**	**Seattle %**	**Purveyor %**
1 toilet	46	26	43	23
2 toilets	37	37	37	37
3 toilets	16	33	17	33
4 toilets	2	4	2	5
DK	NA	NA	1	1
N=	*1223*	*1032*	*530*	*505*

Q29. In the past two years, have you checked any toilets for leaks?
Q30: Did you find any leaky toilets?
Q31: Did you have a chance to fix or replace the leaky toilet?

A majority of respondents (63%) report they have checked their toilets for leaks in the past year, as shown in **Figure 28**, but about one third (35%) said they had not and 2% didn't know. The proportions are very similar to the 1999 baseline. In 1999, significantly more Purveyor than Seattle customers reported they had checked their toilets for leaks, but no differences were found in 2001.

About a third of respondents who checked (36%) said they found a leaky toilet in their home. Of those, most either fixed (75%) or replaced (21%) their toilets; only 4% did not fix their leaking toilets (see **Figures 29, 30)**.

Figure 28: Checking for Leaky Toilets



Comparison to 1999 Baseline	1999 %	2001 %
Yes	64	63
No	34	35
DK	2	2
	1223	*1032*

Seattle-Purveyor Comparison *1999 Sig. = <.05:2001 NS*	1999 Seattle %	1999 Purveyor %	2001 Seattle %	2001 Purveyor %
Yes	57	71	61	65
No	40	28	38	33
DK	2	1	2	2
N=	*602*	*620*	*530*	*505*

Figure 29: Percent Finding Leaky Toilets

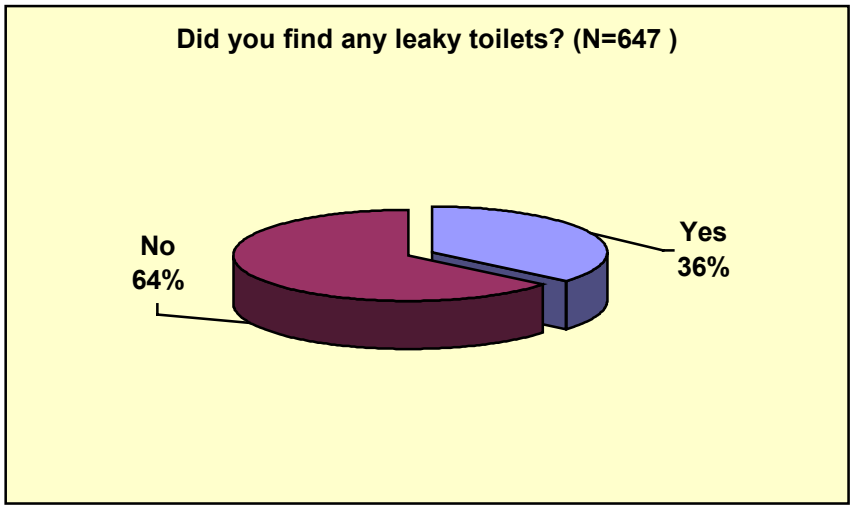
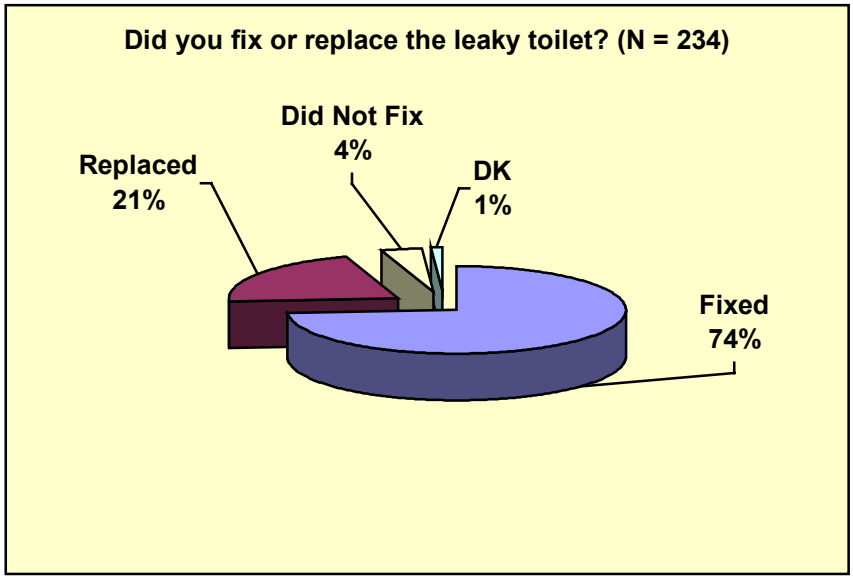


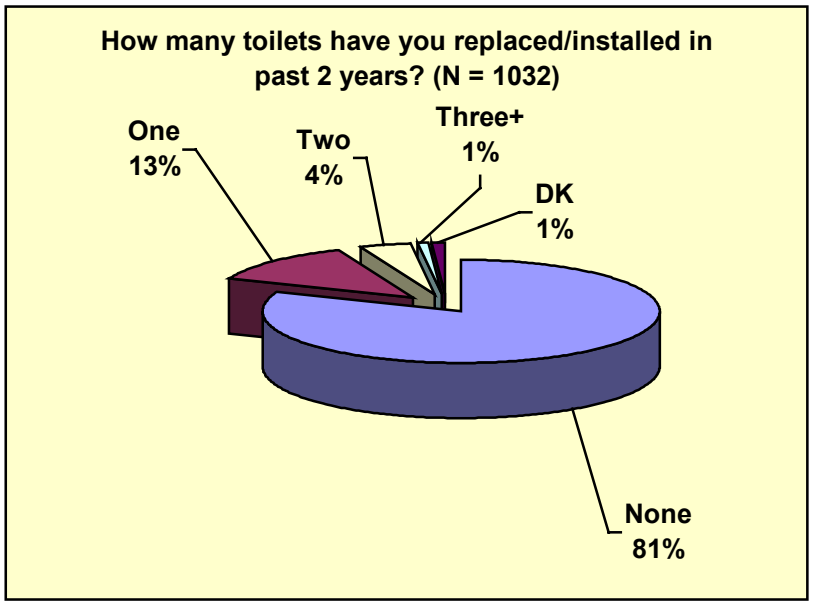
Figure 30: Percent Fixing Leaky Toilets



Q32. How many toilets have you replaced or installed in the past 2 years?
Q33. How satisfied are you with the new toilet?

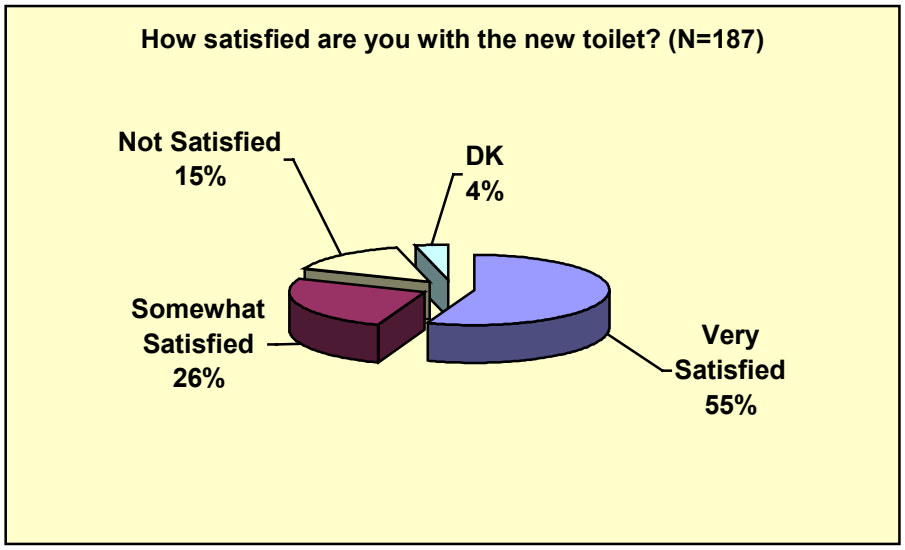
Respondents were asked how many toilets they had replaced or installed new in the past 2 years (since the 1999 baseline). As shown in **Figure 31,** 13% said they had replaced one toilet, 4% had replaced two, and 1% had replaced three or more; 81% had not replaced any toilets. No differences emerged between Seattle and Purveyor customers. (Note: The 1999 Baseline Survey asked about toilet replacements over a seven year period since the new plumbing regulations went into effect. We have decided not to compare that data with this, due to the great difference in time. However, it appears, on average, toilet replacement has accelerated.)

Figure 31: Toilet Replacements in Past Two Years



Because low-flow toilets have generated complaints, and all new toilets must meet the low-flow standards, we asked how satisfied consumers were with their new toilets. As shown in **Figure 32,** a little over half say they are very satisfied (55%), suggesting that many consumers experience at least some problems with their new toilets.

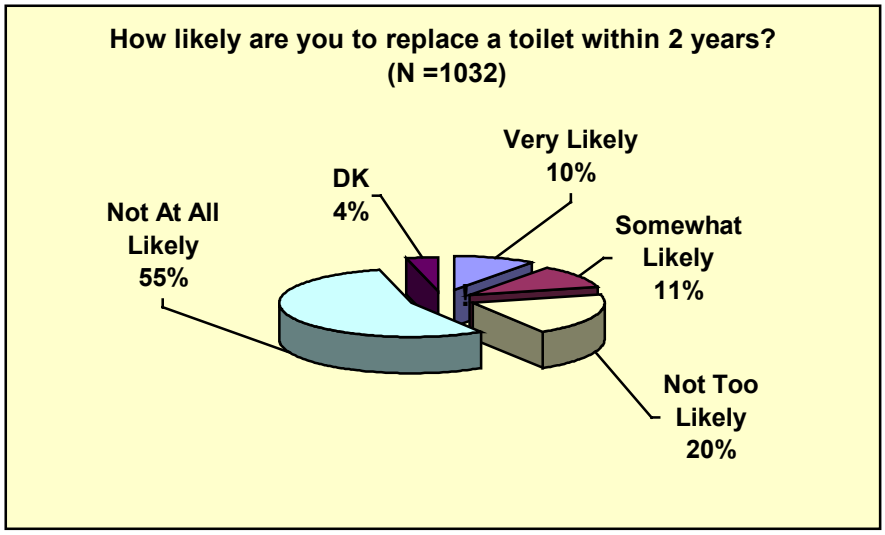
Figure 32: Satisfaction With Toilets Replaced



Q34. Within the next two years, how likely will you be to replace a toilet in your home?
Q35. What is the main reason you will replace a toilet?

Fairly consistent with the proportion of people who have replaced a toilet in the past two years (18%), 21% of respondents say they are very or somewhat likely to replace a toilet in the next two years (see **Figure 33).** This is slightly higher than the 1999 baseline that found an 8% replacement rate over two years. Purveyor customers are more likely to replace a toilet than Seattle customers. When asked why they would likely replace a toilet, remodeling (42%), a failing toilet (28%), and water efficiency (26%) were the top three reasons.

Figure 33: Toilet Replacement within the Next Two Years



Comparison to 1999 Baseline	1999 %	2001 %
Very Likely	8	10
Somewhat Likely	8	11
Not Too/Not At All Likely	81	75
DK	3	3
N=	*1223*	*1032*

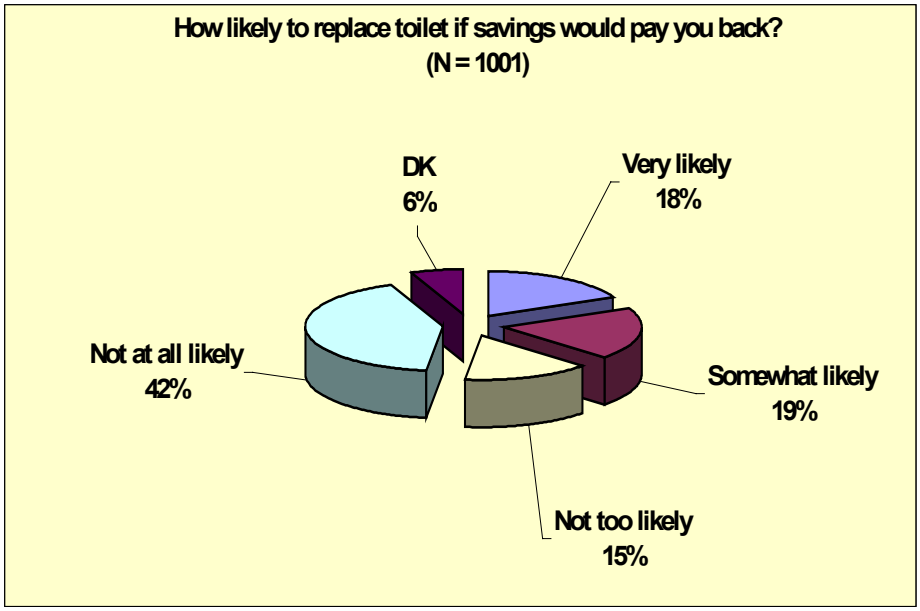
	1999		2001	
Seattle-Purveyor Comparison *Sig. = <.05*	**Seattle %**	**Purveyor %**	**Seattle %**	**Purveyor %**
Very Likely	7	8	9	10
Somewhat Likely	8	7	8	14
Not Too/Not At All Likely	80	82	80	72
DK	5	2	3	4
N=	*603*	*620*	*530*	*505*

Reason to Replace Toilet Within Two Years	2001 %
Remodeling/Updating	42
To save water	26
To save on water bill	6
Toilet not working (well)	28
Other	9
DK	3
N=	*250*

Q36. How likely would you be to spend $100 to $200 to replace a working toilet in your home with a new low-flow toilet if you knew you could save that much money on your water and sewer bills in just a few years?

When respondents were asked if they would spend $100 to $200 to replace a working toilet with a new low-flow toilet model if cost recovery were assured, 37% said they would be very (18%) or somewhat (19%) likely to do so (see **Figure 34**). This notably increased the number of households interested in changing to a new toilet (21% to 37%). While comparable to the 1999 baseline overall, this time Seattle and Purveyor respondents were equally interested.

Figure 34: Likelihood of Replacing Toilet if Savings Assured



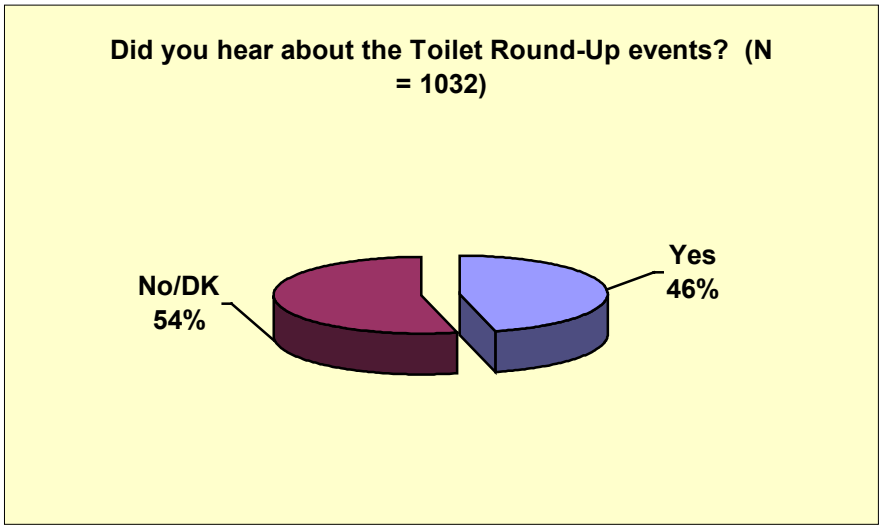
Comparison to 1999 Baseline	1999 %	2001 %
Very Likely	18	18
Somewhat Likely	21	19
Not Too Likely	18	15
Not At All Likely	38	42
DK	5	6
N=	*1223*	*1001*

	1999		2001	
Seattle-Purveyor Comparison *1999 Sig. = <.05/ 2001 NS*	**Seattle** %	**Purveyor** %	**Seattle** %	**Purveyor** %
Very Likely	22	15	19	18
Somewhat Likely	23	20	17	20
Not Too/Not At All Likely	49	60	57	57
DK	6	4	6	6
N=	*603*	*620*	*530*	*505*

Q37: Did you hear about the Toilet Round-Up events? (New)

The two Toilet Round-Up events sponsored by Seattle and Purveyor utilities used unusual advertising and generated a lot of press coverage. The results of this strategy are apparent in the high proportion of customers who remembered these events: 46%. Seattle and Purveyor customers were equally aware of the events.

Figure 35: Awareness of Toilet Round-Ups

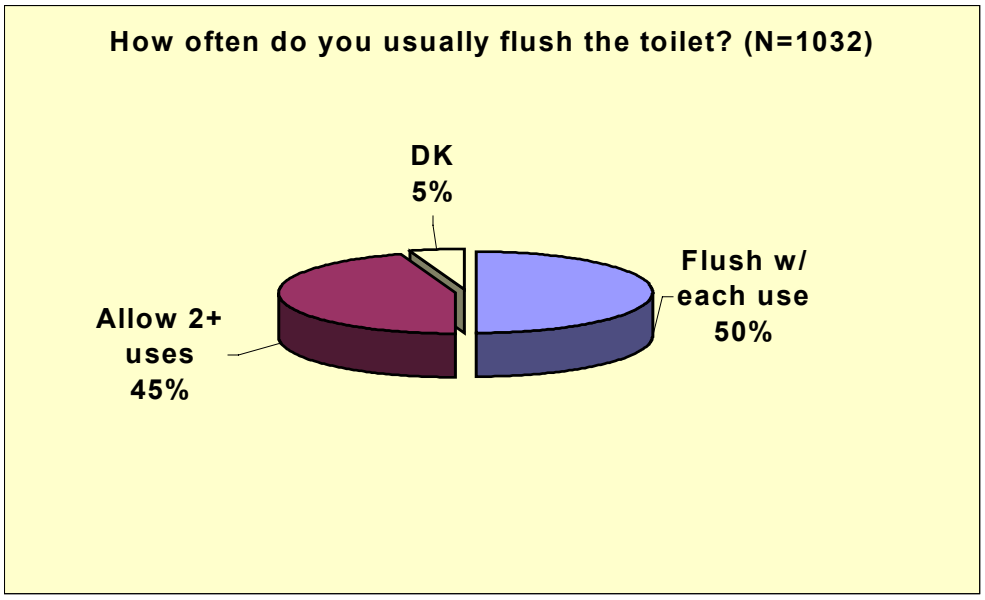


Q38. Do you usually flush the toilet with every use, or do you often allow two or more uses before flushing?

Respondents answered several questions about their toilet flushing habits. Flushing one less time per day was a curtailment messages used during the drought alert.

When asked if they either usually flush the toilet with every use or allow multiple uses before flushing, half of respondents (50%) said they flush with every use (see **Figure 36**) and 45% allow two or more uses before flushing. This is a significant increase in multiple uses per flush behavior since 1999. In 1999, Seattle customers were much more likely than Purveyor customers to allow two or more uses before they flush, but the two groups were equal in 2001.

Figure 36: Toilet Flushing Behavior



Comparison to 1999 Baseline		1999 %	2001 %
Flush with every use		60	50
Allow two or more uses		39	45
DK		1	5
	N=	*1223*	*1032*

		1999		2001	
Seattle-Purveyor Comparison *1999 Sig. = <.05; 2001 NS*		**Seattle %**	**Purveyor %**	**Seattle %**	**Purveyor %**
Every Use		52	67	48	52
2 or more users		46	32	46	44
DK		2	1	5	5
	N=	*603*	*620*	*530*	*505*

Q39: During summer 2001, did you flush at least one less time per day? Q40: Did you flush less due to the drought alert? Q41: Now that the drought is over, how likely are you to continue to flush at least one less time per day?

Forty-six percent of all customers report they flushed at least one less time per day last summer (see **Figure 37)**, and 70% of this group said they did so in response to the drought alert, as shown in **Figure 38.** This is equal to 32% of the population flushing at least one less time per day due to the drought alert.

Just over two-thirds (69%) who flushed less due to the drought said they were very likely to stick with one less flush per day (see **Figure 39**).

Figure 37: Flushing Behavior Last Summer

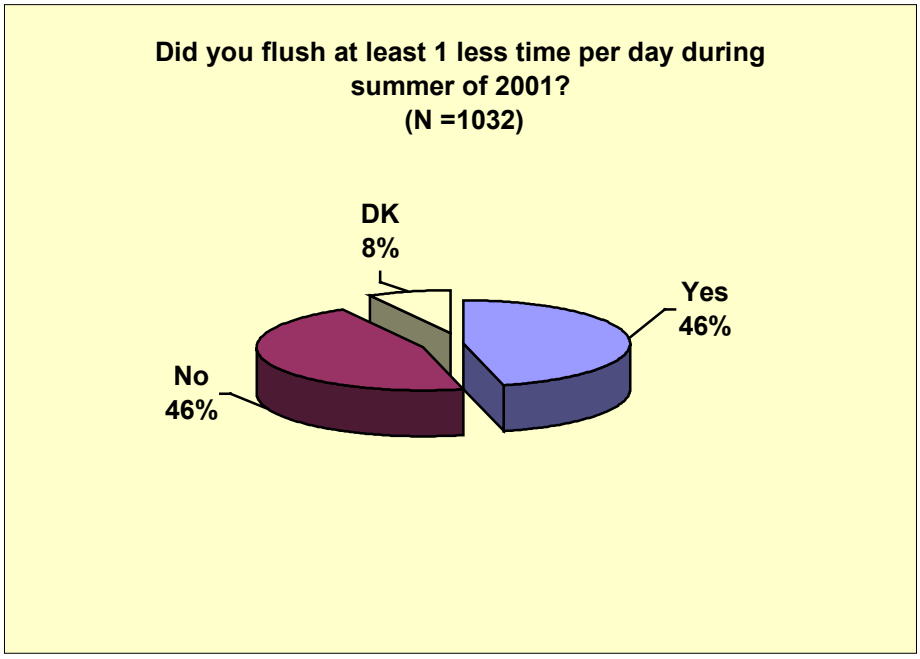


Figure 38: Flushing Behavior Due to the Drought Alert

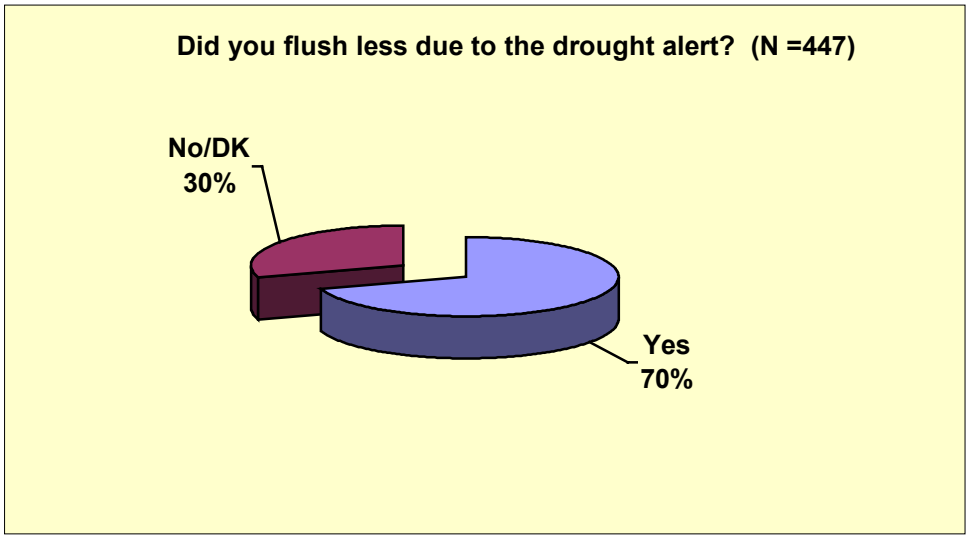
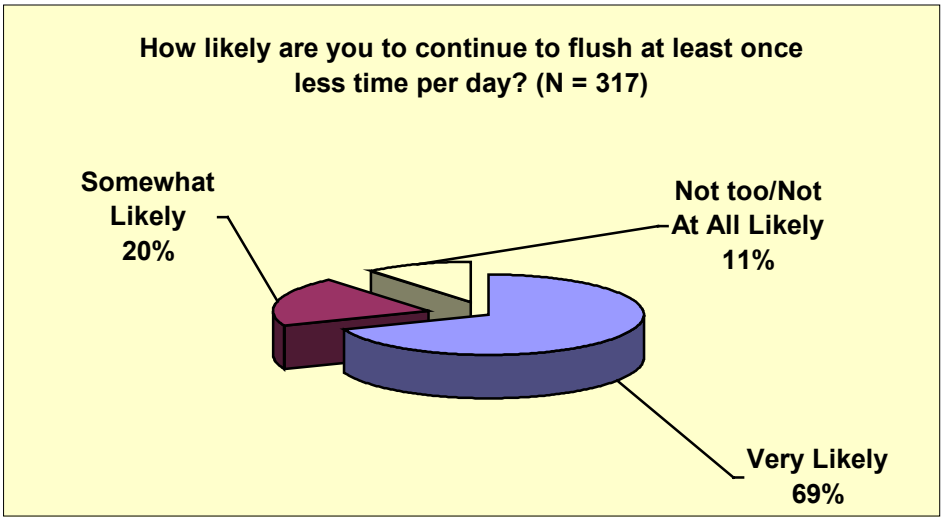


Figure 39: Persistence of Drought Toilet Flushing Behavior



Clothes Washers and Dishwashers

Q411: How often does your HH wash full loads of dishes and clothes? Q412: During the past summer, did you increase full loads? Q413: Did you wash more full loads due to the drought alert? Q414: Now that the alert is over, how likely will your household be t continue to wash full loads as often?

Washing full loads of clothes was another water reduction activity promoted through the drought alert efforts. As shown in **Figure 40**, two-thirds of customers report they always wash full loads of dishes and clothes, and another 22% say they do it most of the time. (Note: The number of respondents for these questions is smaller because the questions were added after fielding began.)

Almost half of respondents (47%) said they increased their use of full loads this past summer, and 98% of that group said they increased their full loads due to the drought alert. The vast majority (92%) of those who increased full load behavior due to the drought alert said they would be very likely to continue to do so; this equates to 41% for the whole population, a higher overall persistence level than for shorter showering or less flushing. See **Figures 41, 42, and 43** for these data.

Figure 40: Proportion of HH Washing Full Loads

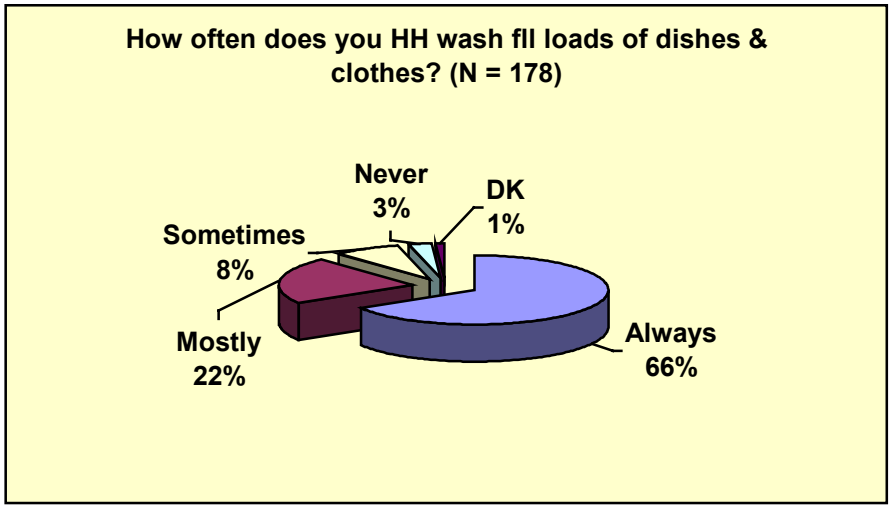


Figure 41: Proportion of HH Increasing Full Loads Last Summer

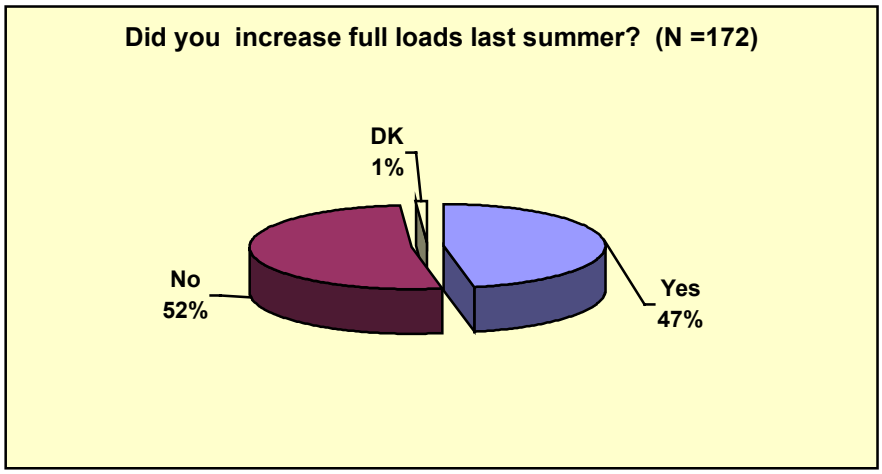


Figure 42: Proportion of HH Increasing Full Loads Due to Drought

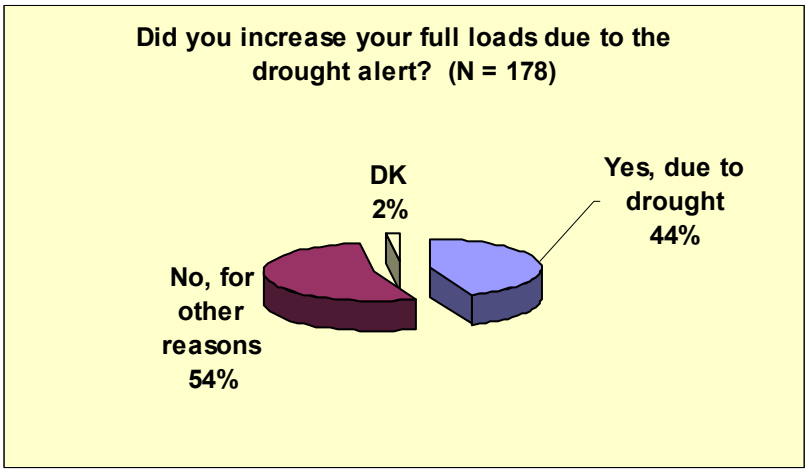
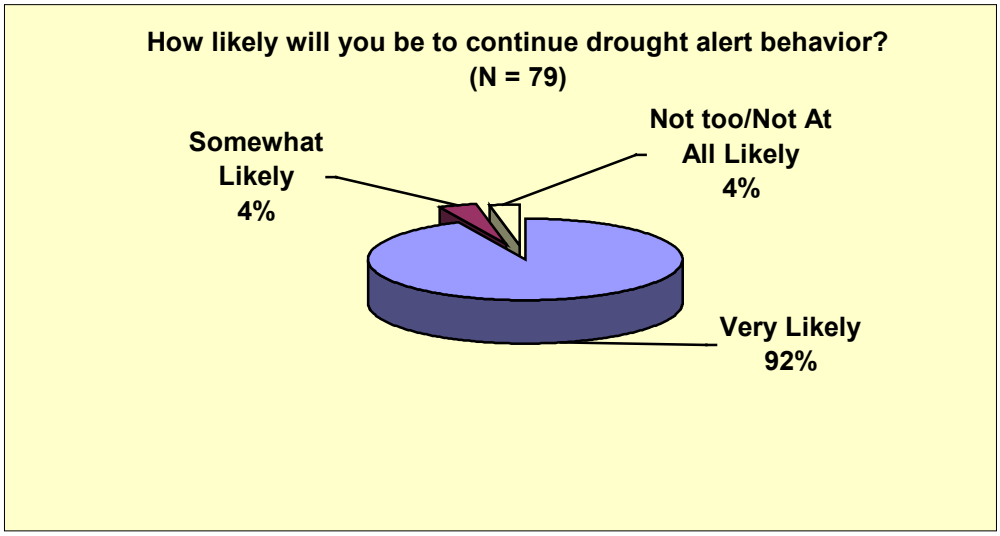


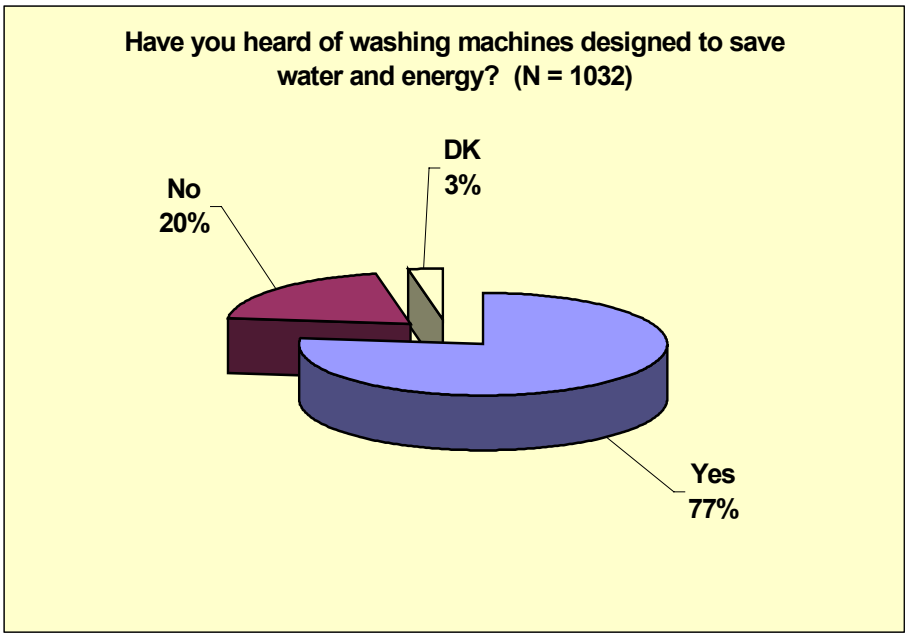
Figure 43: Persistence of Full Load Behavior Due to Drought Alert



Q42: Have you ever heard of washing machines that are designed to save water and energy compared to standard washers? These washers usually load from the front instead of from the top. (Wording change)

This question revealed that a large majority (77%) of all respondents said they had heard of resource efficient horizontal-axis washing machines that are usually loaded from the front instead of from the top. As shown in **Figure 44** below, 45% said they had not heard of these water- and energy-saving washing machines and 2% didn't know. This is a huge leap in awareness since the 1999 baseline awareness of 53%. No differences surfaced between Seattle and Purveyor customers.

Figure 44: Knowledge of Resource Efficient Washers?



Comparison to Baseline		1999 %	2001 %
Yes		53	77
No		45	20
DK		2	3
	N =	*1223*	*1032*

Q43: Have you heard of the WashWise Program? Q44: Have you bought a new washer in the past two years? Q45: Did you buy washer designed to save water and energy, or a standard washer? Q46: Did you apply for a WashWise rebate? Q47: How likely would you have been to buy the resource efficient washer without the WashWise rebate? (All New)

Awareness of the WashWise Program, that provides rebates for qualifying resource efficient washers, is 27% (see **Figure 45**). Within the respondent group, 20% report they had bought a washer in the past two years (**Figure 46)**. More Purveyor than Seattle customers reported buying new washers.

More than half of new washer buyers (61%, see **Figure 47**) claim they bought a washer designed to save energy and water, rather than a standard washer. Since the market share of resource efficient washers is not nearly that high, this finding may reflect that consumers may not be clear about the definition of a water and energy efficient washers, especially o

nes that would qualify for a WashWise rebate. (Note: In the future, this question might be revised to better define (again) the type of washer being asked about.)

Of the 128 respondents who say they bought a resource efficient washer, less than half (43% or 55 respondents) report they applied for a WashWise rebate (**Figure 48**). Thus, at least 27% (55 out of 203) of those who bought new washers did buy a qualified resource efficient one. Very few of these buyers were solely motivated by the rebate: only 9% say the lack of a rebate would have stopped them from buying a resource efficient washer (**Figure 49**).

Figure 45: Proportion of HH Aware of WashWise Program

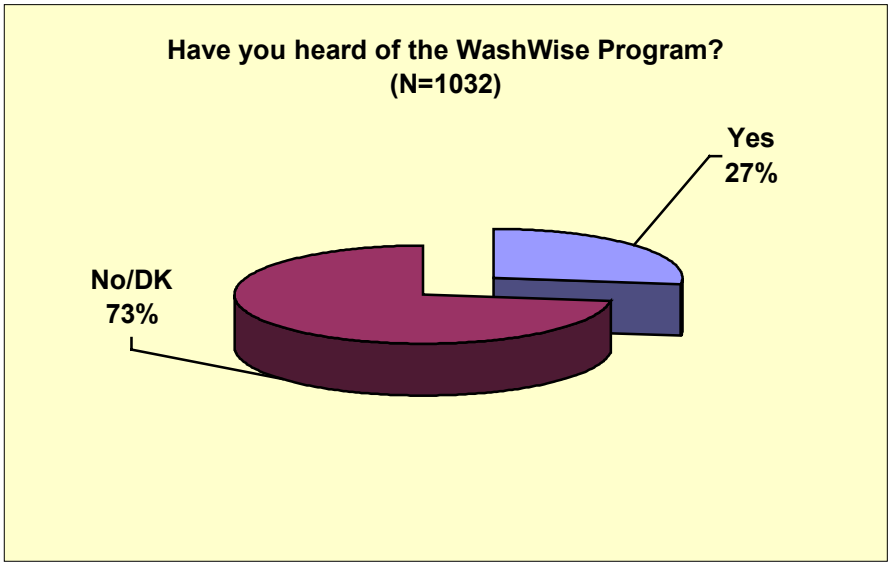


Figure 46: Proportion of HH Buying New Washers in Past Two Years

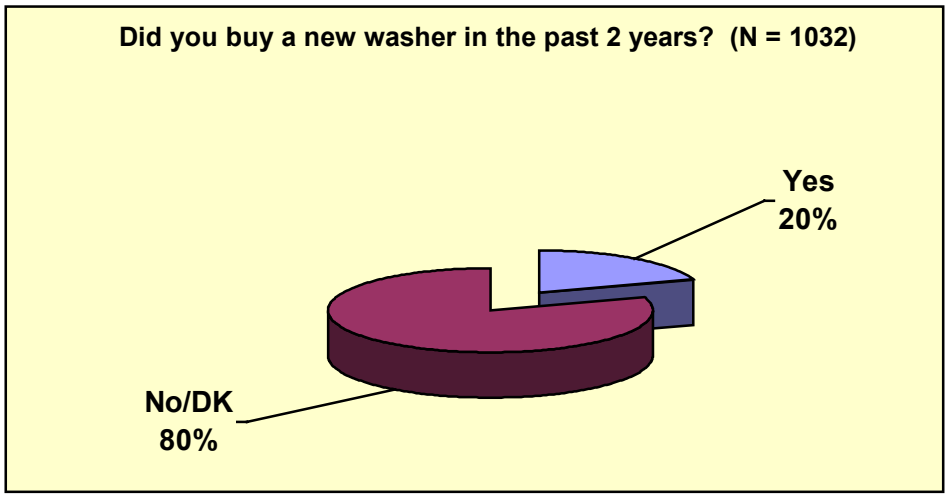


Figure 47: Standard Versus Resource Efficient Washer Purchases

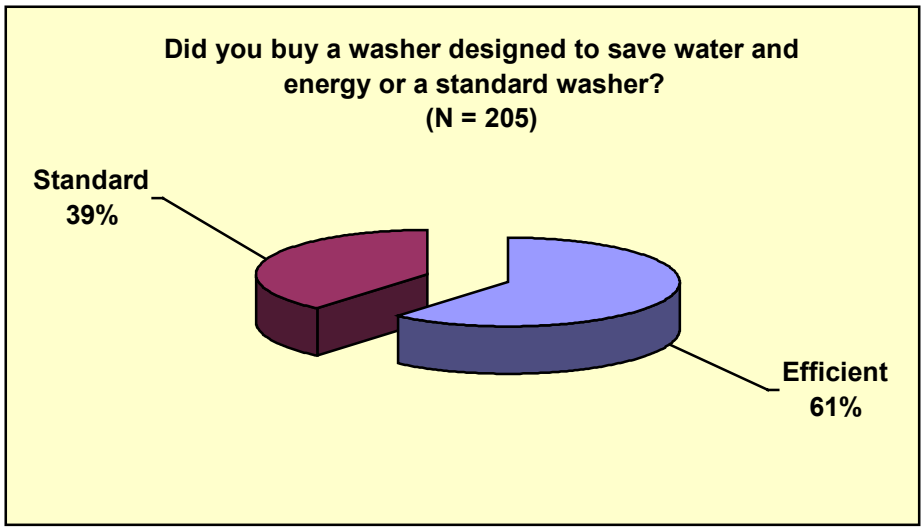


Figure 48: Proportion of Buyers Getting WashWise Rebate?

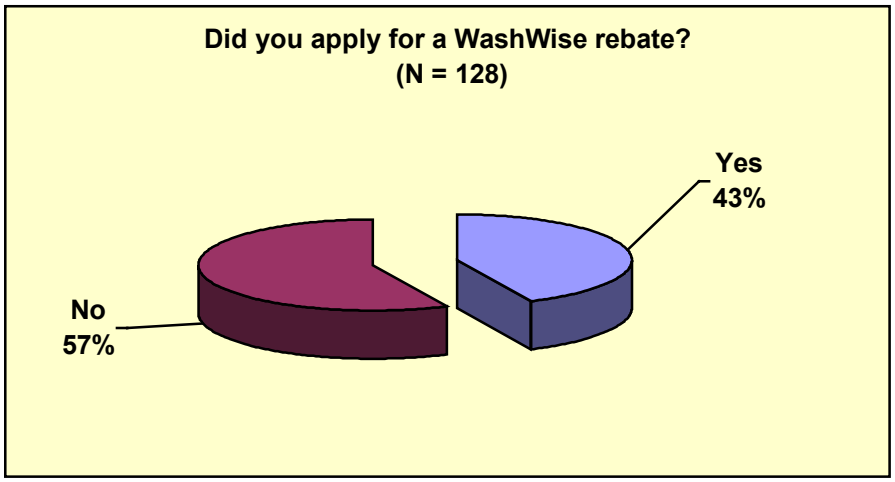
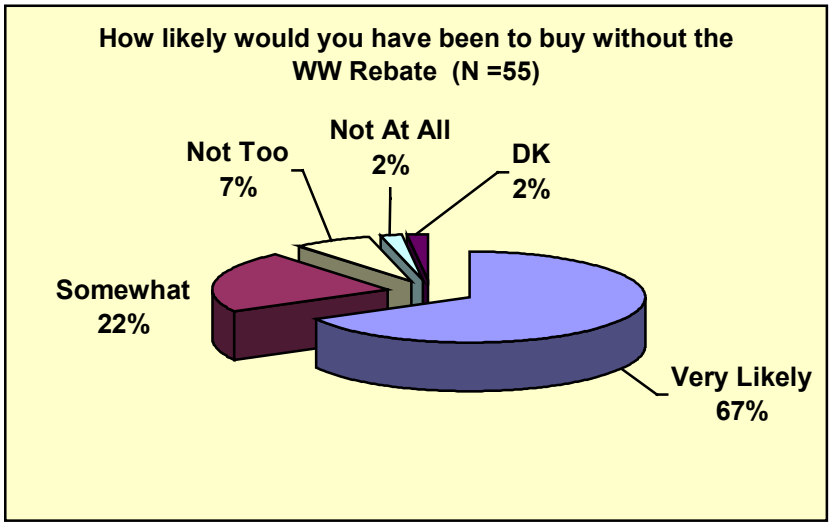


Figure 49: Influence of WashWise Rebate



Q48: Why did you decide on the type of washer you bought?

As shown in **Table 9,** the most common reasons that respondents gave for buying resource efficient washers was the price (this may be reflecting the rebate), energy and water savings, and saving on utility bills. Buyers of standard washers most often gave price-related reasons (higher cost/not affordable).

Table 9: Reasons to Buy Resource Efficient or Standard Washers

Reasons to Buy	Resource Efficient %	Standard Washer %
Price/affordability of machine (positive or negative)	15	61
Energy and water savings/efficiency	41	-
Save on bills	15	-
Stackable/Space an issue	-	8
Gets clothes cleaner	5	-
The WashWise Program	3	-
Note: Reasons given by two or fewer respondents are not reflected in this table.		

Q49: Where would you most likely get information about appliances such as showerheads, toilets and washing machines?

Respondents were also asked where they were most likely to get information about appliances, such as showerheads, toilets, and washing machines. As shown in **Table 10** below, just over half (54%) go to home improvement, hardware, or appliance stores. Another 21% utilize books and magazines; 16% read newspaper articles, columns and ads; 17% surf the internet; 15% rely on their utilities; and 8% get information from radio and TV shows or ads.

No significant differences occurred between Seattle and Purveyor customers. However, it is interesting to note that the proportion of respondents mentioning each category generally increased from 1999 to 2001, especially for use of the Internet (up 11%) and for relying on utilities for information (up 15%).

Table 10: Usual Source of Information about Appliances

Sources of Information	1999 %	2001 %
Home improvement, hardware, or appliance store	49	54
Books and magazines	14	21
Newspaper articles/ads	11	16
Internet	6	17
Utility	0	15
Radio/TV Ads	4	8
Other	7	5
None-don't get information	6	1
DK	3	4
N =	1223	1032

CHAPTER FOUR – OUTDOOR WATER USE

This chapter characterizes how customers use water outdoors. While this is usually confined to lawn and garden care, car washing, an outside activity, has also been included here. Many of the behavioral questions are tracking items that will be compared to 1999 data; however, several attitudinal questions have been added to find out more about the perceptions and beliefs of these customers who are responsible for summer peak water use.

Car Washing

Q50: During this past summer how did you wash your car? Q51: Did you go to a car wash due to the drought alert? Q52: Will you continue to use a car wash without the drought alert?

Another curtailment message during the summer 2001 drought alert was to take your car to a car wash that recycles water (virtually all do). As shown in **Figure 50** below, 38% of customers did use a car wash, and 32% report they did not wash their cars. Of those who did use a car wash, 31% (**Figure 51**) reported they did so due to the drought alert (12 % of the entire population). Thus, the response to this drought message was much more limited than for those previously discussed in this report. Most of those who used a car wash say they will continue (71%, see **Figure 52**). There were no differences between Seattle and Purveyor customers.

Figure 50: Car Washing During the Drought Alert

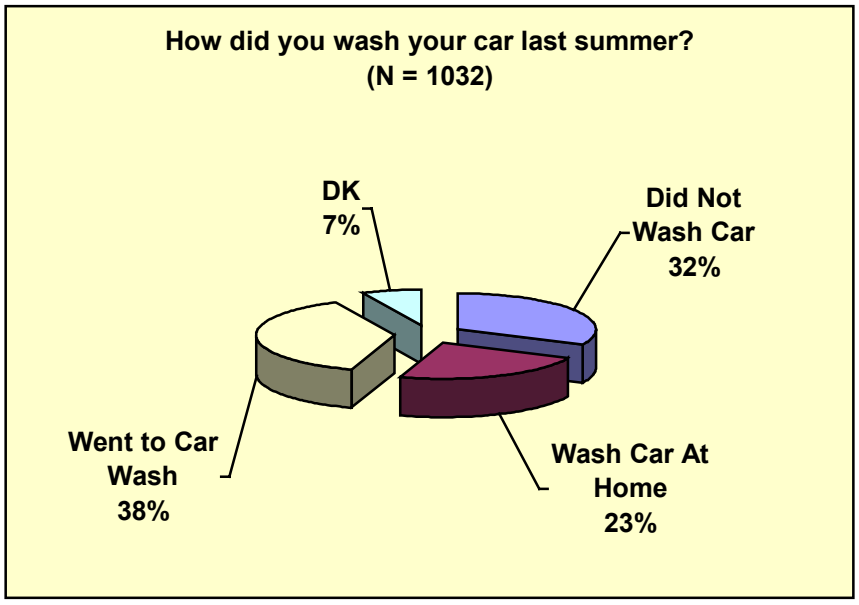


Figure 51: Using A Car Wash Due To The Drought Alert

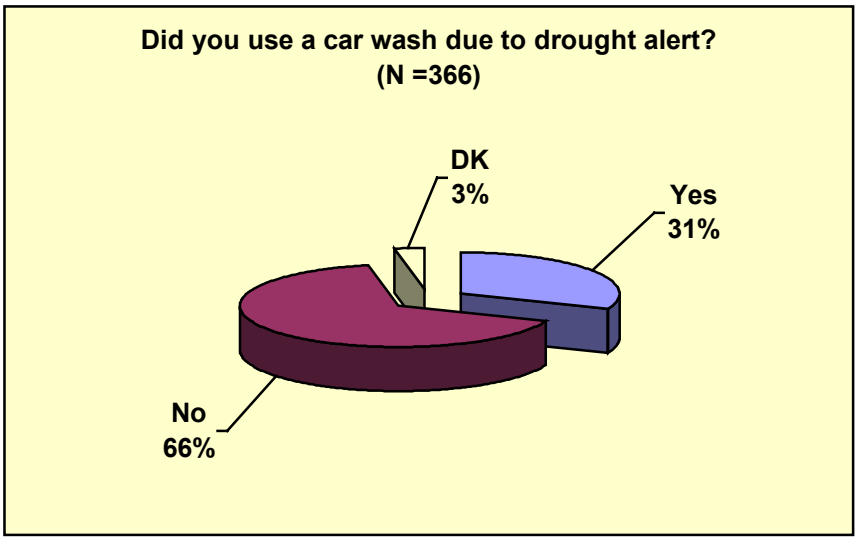
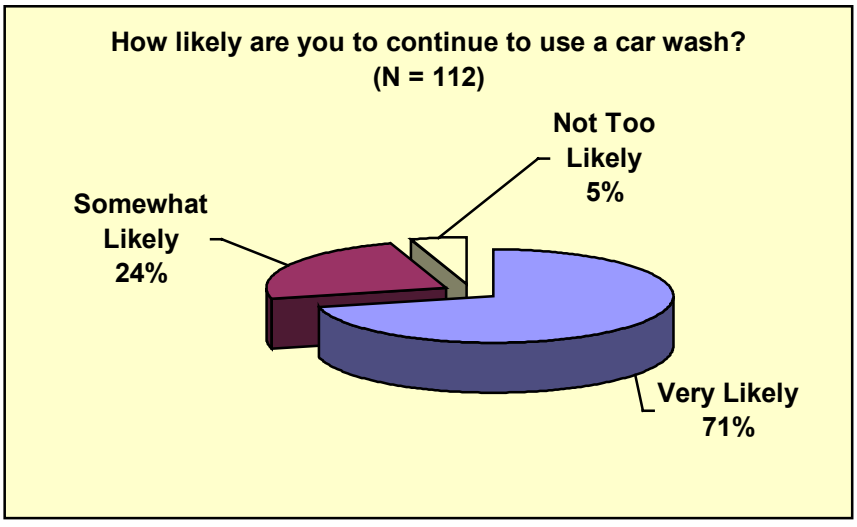


Figure 52: Persistence of Using a Car Wash

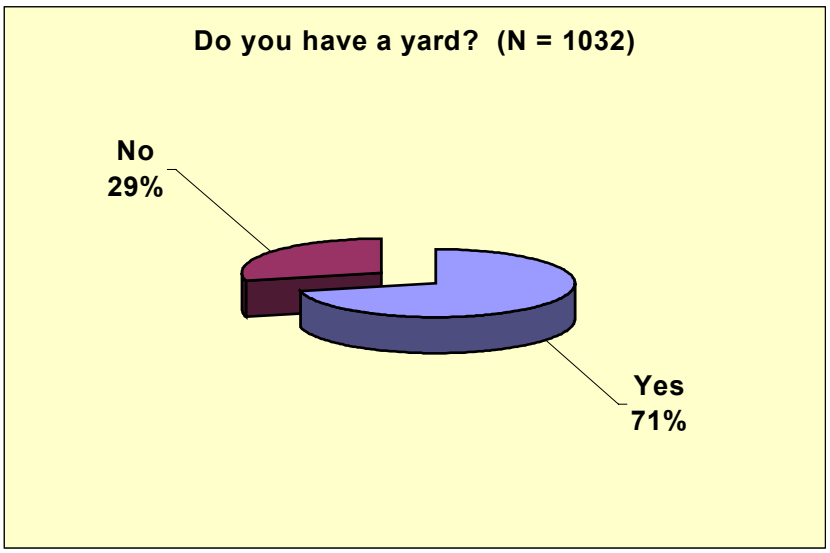


Incidence of Yards and Lawns

Q53: Do you have a yard?

To help filter respondents through the outdoor water section of the interview, respondents were first asked if they had a yard. As shown in **Figure 53** below, over two-thirds of respondents (71%) do have yards, while 29% do not. Data comparisons show that significantly more Purveyor respondents have yards than Seattle respondents (64% vs. 77%). The over-time comparisons show that the presence of a yard may be dropping – from 77% in 1999 to 71% in 2001, with a greater drop in Seattle than in Purveyor areas.

Figure 53: Presence of a Yard



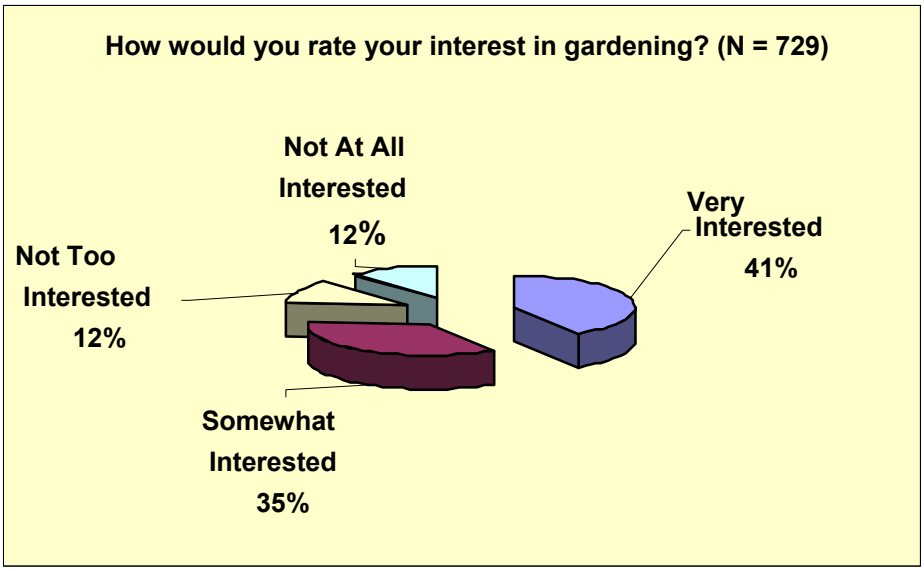
Comparison to 1999 Baseline	1999 %	2001 %
Yes	77	71
No/DK	23	29
N=	*1223*	*1032*

	1999		2001	
Seattle-Purveyor Comparison ***Sig. = <.05***	**Seattle %**	**Purveyor %**	**Seattle %**	**Purveyor %**
Yes	74	80	64	77
No/DK	26	20	35	23
N=	*603*	*620*	*530*	*505*

Q54: How would you rate your interest in gardening? (New)

Among customers who have yards, just over three-quarters report they are interested in gardening, with 41% saying they are very interested, and another 35% saying they are somewhat interested (see **Figure 54** below). Seattle customers are somewhat less interested in garden and lawn compared to Purveyor customers.

Figure 54: Level of Interest in Gardening



Interest in Gardening		2001	
Seattle-Purveyor Comparison *Sig. = <.05*		**Seattle %**	**Purveyor %**
Very Interested		42	40
Somewhat Interested		30	38
Not Too Interested		12	12
Not At All Interested		16	10
	N=	*341*	*388*

Q55: Of the yard around your home that's planted with lawn and garden, how much of it is lawn?

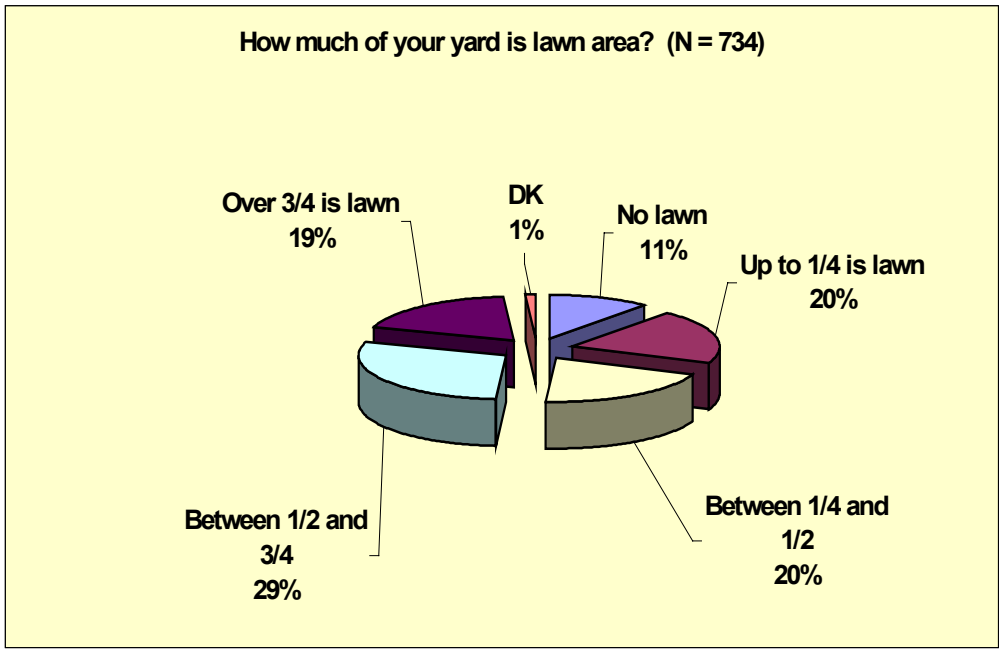
To further filter respondents through this outdoor section, respondents with yards (71% of the total population) were asked if any part of their yard was planted with lawn. As shown in **Figure 55,** 11% report their yards have no lawn. The remaining lawn coverage categories are also consistent with 1999 and are fairly evenly divided between those where:

- up to ¼ of their yard area is lawn (20%)
- ¼ to ½ of their yard area is lawn (20%)
- ½ to ¾ of the yard area is lawn (29%)
- over ¾ of the yard area is lawn (19%).

Thus, there is little change overall since1999.

Significant differences are present between Seattle and Purveyor customers. More Seattle than Purveyor customers have no lawn, Seattle customers have a smaller proportion of their yards in lawn. These differences were evident in 1999. Still, in looking across the years, it appears that Seattle lawn coverage is shrinking while Purveyor lawn coverage may be growing.

Figure 55: Amount of Yard in Lawn



Comparison to 1999 Baseline	1999 %	2001 %
No lawn	9	11
Up to ¼ lawn	20	20
¼ to ½ lawn	24	20
½ to ¾ lawn	26	29
Over ¾ lawn	19	19
DK	2	1
N=	*945*	*734*

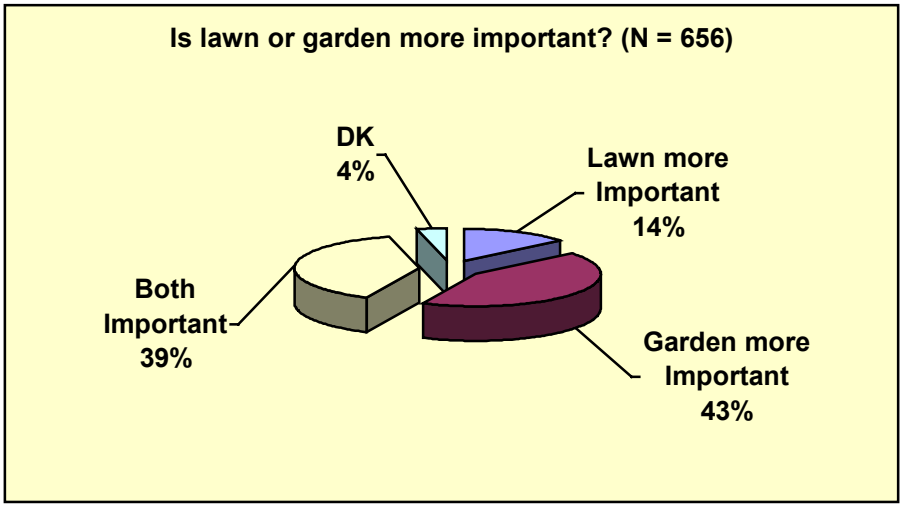
Seattle-Purveyor Comparison *Sig. = <.05*	1999 Seattle %	1999 Purveyor %	2001 Seattle %	2001 Purveyor %
No lawn	8	10	14	9
Up to ¼ lawn	21	19	23	18
¼ to ½ lawn	26	23	23	18
½ to ¾ lawn	28	24	26	31
Over ¾ lawn	16	23	13	23
DK	1	2	2	2
N=	*445*	*497*	*340*	*388*

Lawn Care Preferences and Practices

Q56: Is lawn more important than garden, garden more important than lawn, or are the two equally important? (New) Q57: How important is it for you to have a green lawn as part of your landscaping?

Those who had both lawn and garden areas were asked about the relative importance of each type of landscaping. **Figure 56** shows that lawn areas by themselves are rarely the most important (14%), but there is a fairly equal spread between those who value garden areas the most (43%), and those who prefer both garden and lawn areas (39%). Seattle customers are distinctively more interested in garden areas than lawns, with 53% saying they feel their garden areas are most important, compared to 37% of Purveyor customers.

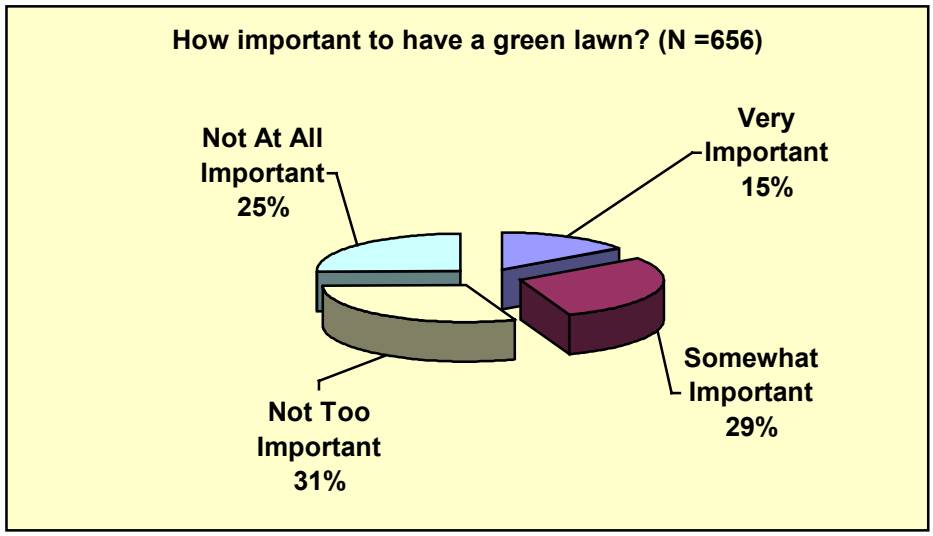
Figure 56: Relative Importance of Lawn and Garden Areas



Seattle-Purveyor Comparison *Sig. = <.05*		2001 Seattle %	2001 Purveyor %
Lawn more important		11	15
Garden more important		53	37
Both equally important		31	44
DK		5	3
	N=	*530*	*505*

Those who had lawn were asked how important it was to have a green lawn. As shown in **Figure 57** below, 44% said it was either very (15%) or somewhat (29%) important, while the remainder (56%) said it was either not too (31%) or not at all (25%) important to have a green lawn. Although no change is evident over the past two years, data from a 1994 customer survey shows that attachment to a green lawn has declined (61% very or somewhat important compared to 44% this year). As in 1999, Purveyor customers appear to place a higher value on having a green lawn than Seattle customers, with 49% saying it was important, compared to 36% of the Seattle group.

Figure 57: Importance of a Green Lawn



Comparison to Prior Surveys		1994	1999 %	2001 %
Very Important		22	16	15
Somewhat Important		39	30	29
Not Too Important		27	30	30
Not At All Important		12	25	25
	N=	*2255*	*1223*	*1032*

Seattle-Purveyor Comparison *Sig. = <.05*	1999 Seattle %	1999 Purveyor %	2001 Seattle %	2001 Purveyor %
Very Important	11	19	14	15
Somewhat Important	26	33	22	34
Not Too Important	30	28	34	29
Not At All Important	32	22	30	22
N=	*603*	*620*	*530*	*505*

Lawn Removal

Q58: In the past two years, have you removed any lawn? (new time frame) Q59: Was saving water one of the reasons to remove lawn? (new)

A quarter of respondents said they had removed at least some lawn during the past two years, and a notable minority of that group (27%) group said saving water was part of their decision. Seattle and Purveyor customers did not differ on these two questions. (See **Figures 58 and 59** below.)

In the 1999 baseline, a similar question was asked but with a 6 year time frame; in that study, 29% said they had removed some of their lawn during the past six years. These data suggest that more lawn removal may be going on.

Figure 58: Lawn Removal

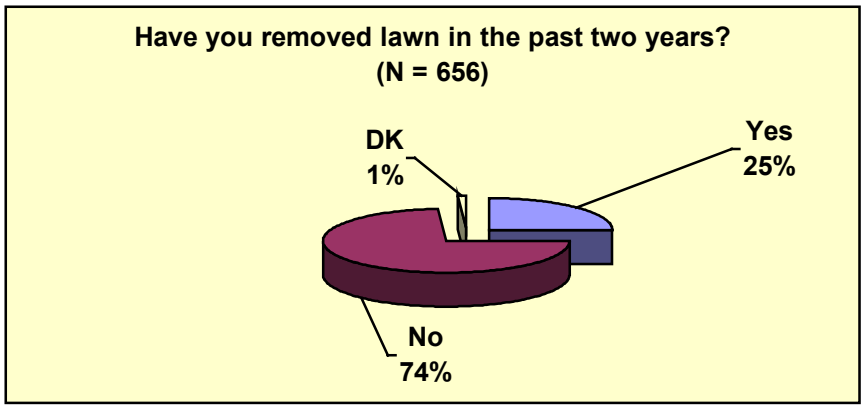
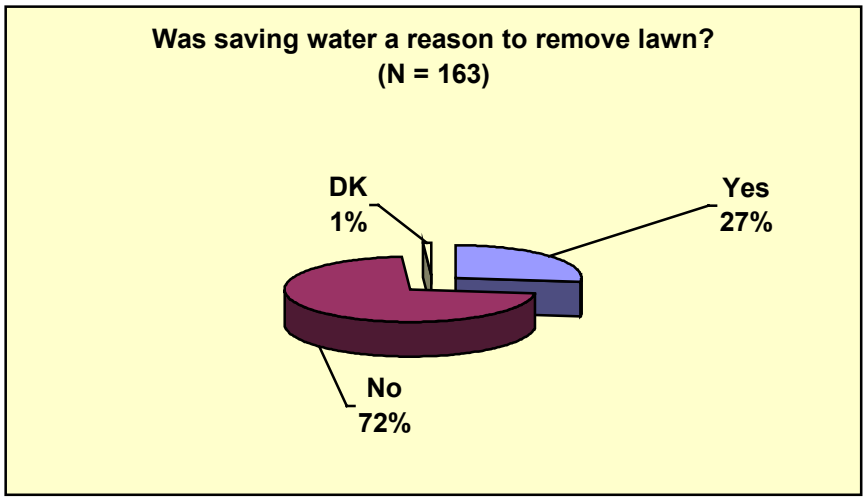


Figure 59: Removal of Lawn to Save Water

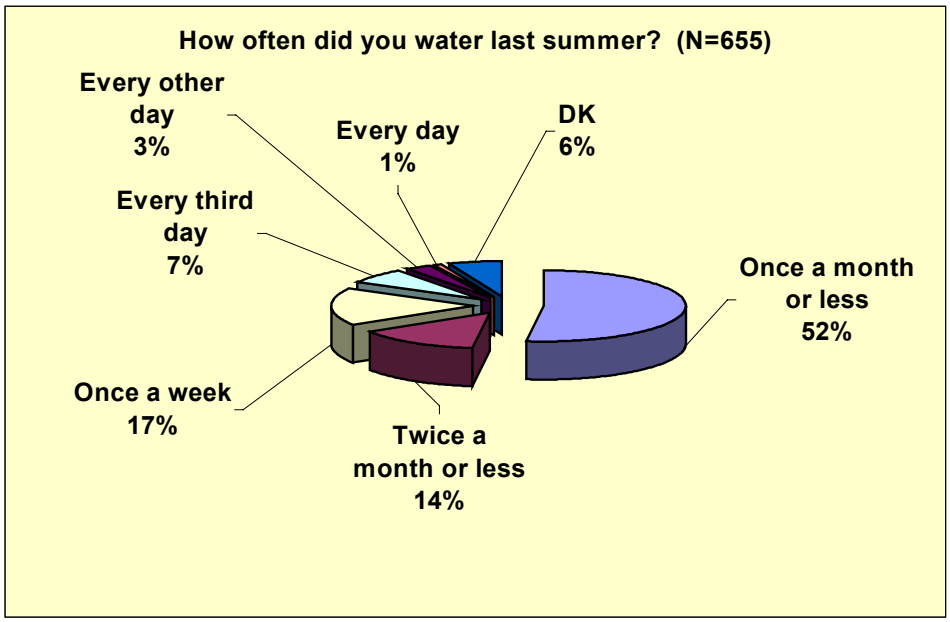


Lawn Watering

Q60: Which describes how often you watered your lawn last summer?

When asked how often they watered their lawn last summer, just over half (52%) of customers with lawns said they essentially never water it (once or month or less). About 14% water twice a month, 17% once a week, 7% every 3 days, 3% every other day, and 1% every day (**Figure 60**). Significant differences exist between Seattle and Purveyor customers, with Purveyor customers watering a little more often. Overall, though, the trend toward never watering and watering less continue both for Seattle and Purveyor customers. And, a huge decrease in lawn watering occurred during the 2001 summer drought alert.

Figure 60: Lawn Watering in Summer 2001

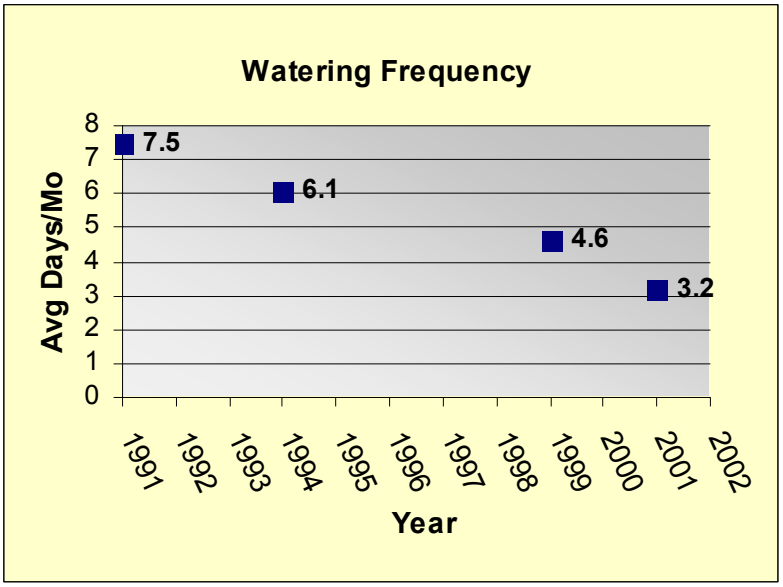


Comparison to 1999 Baseline	1999 %	2001 %
Never/Once a month or less	30	52
Twice a month	24	14
Once a week	24	17
Every third day	14	7
Every other day	5	3
Every day	2	1
DK	1	6
N=	*1223*	*1032*

	1999		2001	
Seattle-Purveyor Comparison *1999 NS, 2001 Sig. = <.05*	**Seattle** %	**Purveyor** %	**Seattle** %	**Purveyor** %
Never/Once a month or less	36	27	56	49
Twice a month	23	24	10	17
Once a week	21	25	14	19
Every third day	14	15	6	6
Every other day	3	6	3	3
Every day	2	2	1	1
DK	-	-	10	3
N=	*410*	*448*	*293*	*355*

Figure 61 dramatically shows this downward trend, using survey data since 1991, in terms of average days of watering per month. In 1991, the average number of days to water was over 7 days per month; in 2001, that average dropped to just over three days per month.

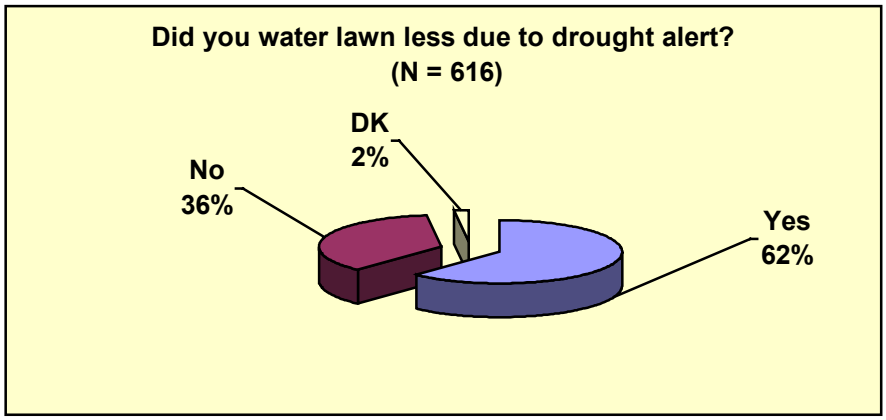
Figure 61: Average Number of Days Per Month for Lawn Watering



Q61: Did you water your lawn less due to the drought alert? (new) Q62: If no drought next summer, will you continue watering the same amount? (new)

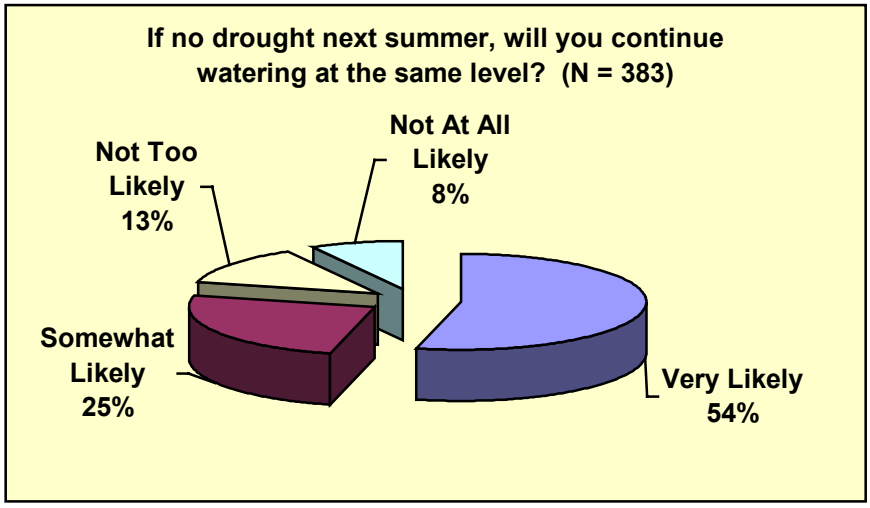
A substantial proportion of customers (62%) reported that they watered less during the summer of 2001 due to the drought alert in effect. Purveyor customers, more than Seattle customers, responded to the drought alert by watering their lawns less. Of the 62% who watered less, about half (54%, or equal to 33% of all customers with lawns) say they will continue to water at the same level next summer. (See **Figures 62 and 63**) Seattle and Purveyor customers were equally likely to persist in the watering behavior brought on by the drought alert.

Figure 62: Drought Alert and Less Watering



	2001	
Seattle-Purveyor Comparison ***Sig. = <.05***	**Seattle %**	**Purveyor %**
No	57	65
Yes	39	33
DK	4	2
N=	*530*	*505*

Figure 63: Persistence of Drought Alert Lawn Watering Behavior



Q63: During last summer did you usually water your lawn during evening and early morning? (new) Q64: Did you change your lawn watering times due to the drought alert? (new) Q65: If there is no drought next summer, will you continue early and evening watering?

Watering during early morning and evening hours was another curtailment message of the drought alert. As shown in **Figure 64**, 69% report they watered during hours when evaporation is less. No significant differences were found between Seattle and Purveyor customers. Only about a third of respondents who changed their watering behavior during the summer say they did so due to the drought alert. (**Figure 65**) Most of those who changed their hours due to the drought say they will continue (87%, see **Figure 66**). Seattle and Purveyor customers did not differ in persistence levels.

Figure 64: Lawn Watering Hours in Summer 2001

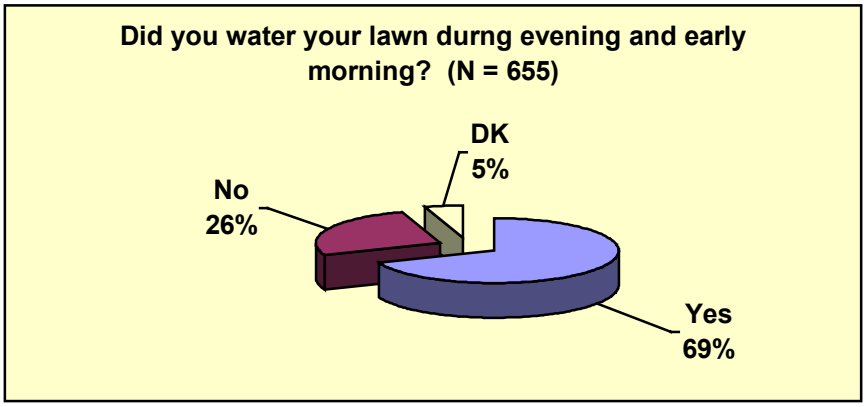


Figure 65: Changes in Lawn Watering Hours Due to Drought Alert

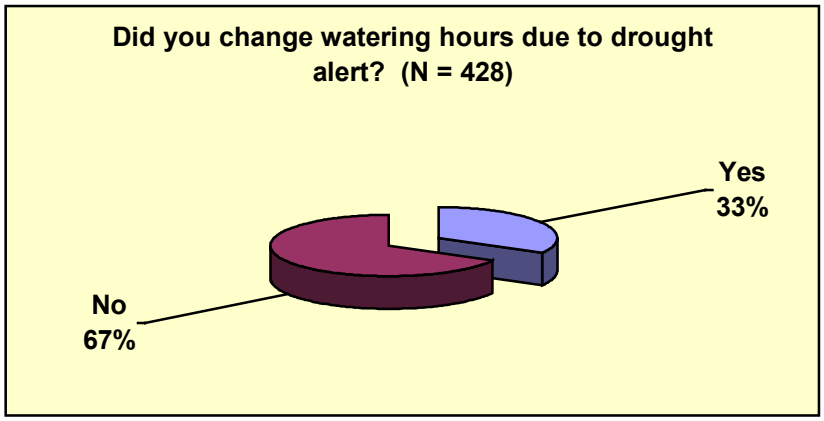
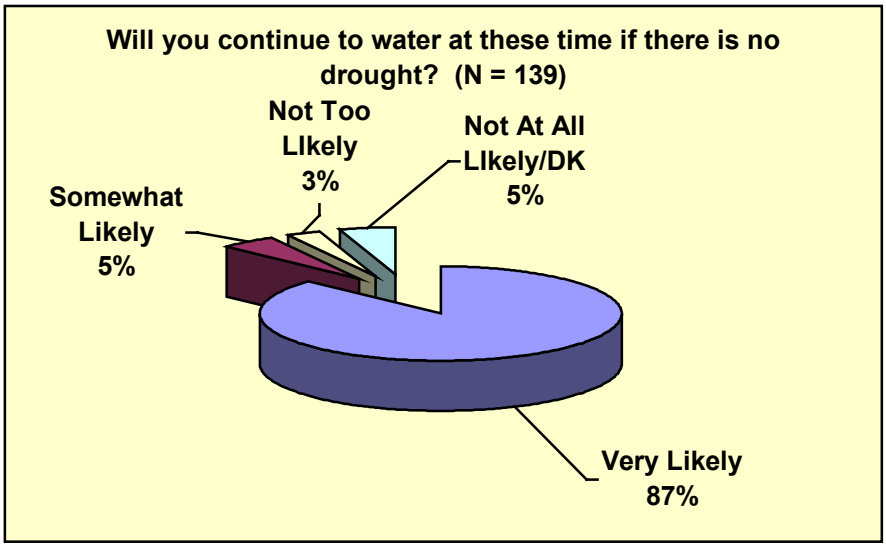


Figure 66: Persistence of Drought Alert Watering Times



Use and Maintenance of Automatic Sprinkling Systems

Q66: Do you use an automatic sprinkling system to water your lawn?
Q67: During the watering season, do you adjust the automatic system so that it waters less when it's cooler and more when it's hotter?
Q68: Do you inspect your automatic system for leaks at least once a year?

Respondents with lawns were asked if they used an automatic sprinkler system to water them. 86% reported they were not using an automatic sprinkler system

to water their lawns (**Figure 66).** While 2001 data suggest use of automatic sprinkler systems has dropped significantly, this is probably due to the drought alert and cannot be relied upon to persist. Over half of those using an automatic system (56%) report they adjust the system for temperature changes, and 75% say they have the system inspected for leaks at least once a year (**Figures 68 and 69**). No significant differences exist between Seattle and Purveyor customers.

Figure 67: Proportion Watering Lawns in 2001 with Automatic Systems

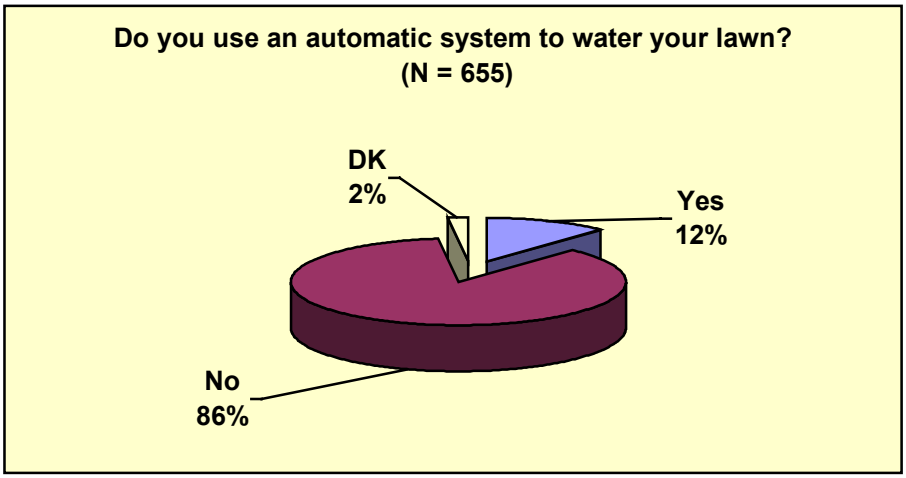


Figure 68: Adjustment of Automatic System

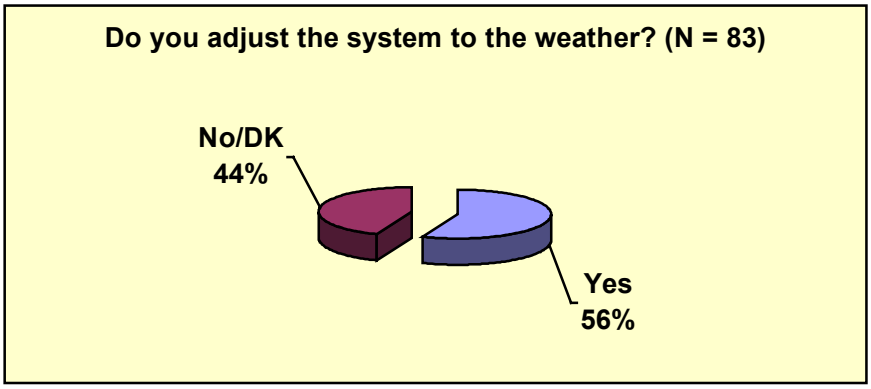
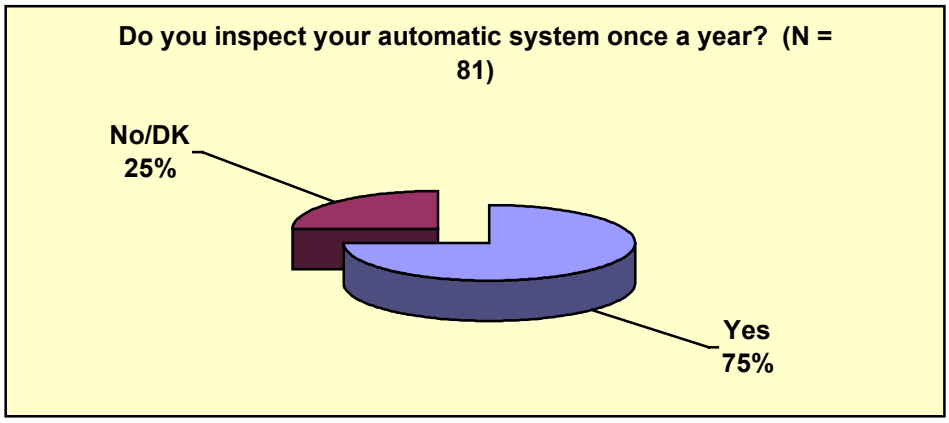


Figure 69: Inspection of Automatic Sprinkling System?



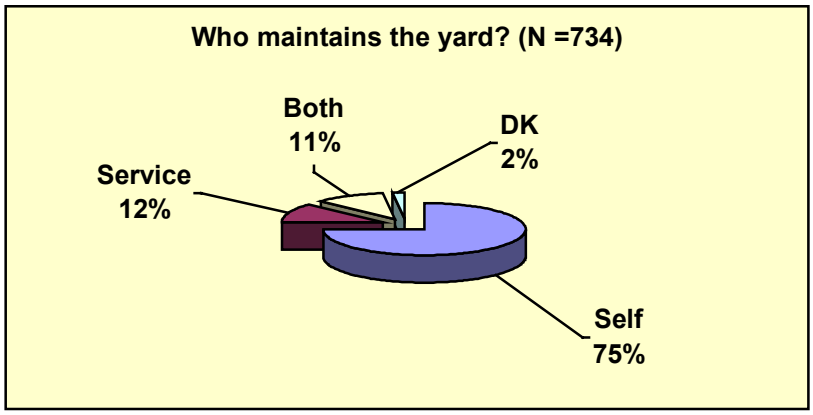
Comparison to 1999 Baseline	1999 % Yes	2001 % Yes
Use system? (Ns = 594 and 655)	21	12
Adjust for temperature? (Ns = 125 and 83)	59	56
Inspected? (Ns = 125 and 81)	74	75

	1999		2001	
Seattle-Purveyor Comparison ***NS***	**Seattle % Yes**	**Purveyor % Yes**	**Seattle % Yes**	**Purveyor % Yes**
Use system? (Ns = 594 and 655)	19	23	11	13
Adjust for temperature? (Ns = 125 and 83)	47	66	57	55
Inspected? (Ns = 125 and 81)	63	80	76	74

Q70: Do you mostly maintain your own yard, hire a professional yard service, or both?

Three-quarters of respondents with yard keep up their own yards, while12% hire professional yard maintenance companies, and 11% combine the methods (thus, about a quarter hire professional at least some of the time). Purveyor customers are significantly more likely to hire professional help to maintain their yards. (See **Figure 70**).

Figure 70: People Responsible for Yard Maintenance



Comparison to 1999 Baseline		1999 %	2001 %
Self-maintained		75	75
Hires professionals		12	12
Both		11	11
DK		1	2
	N=	*946*	*734*

Seattle-Purveyor Comparison *Sig. = <.05*		1999 Seattle %	1999 Purveyor %	2001 Seattle %	2001 Purveyor %
Self-maintained		73	77	71	78
Hires professionals		14	12	14	11
Both		11	11	10	11
DK		1	-	4	1
	N=	*445*	*497*	*340*	*388*

Lawn and Garden Practices

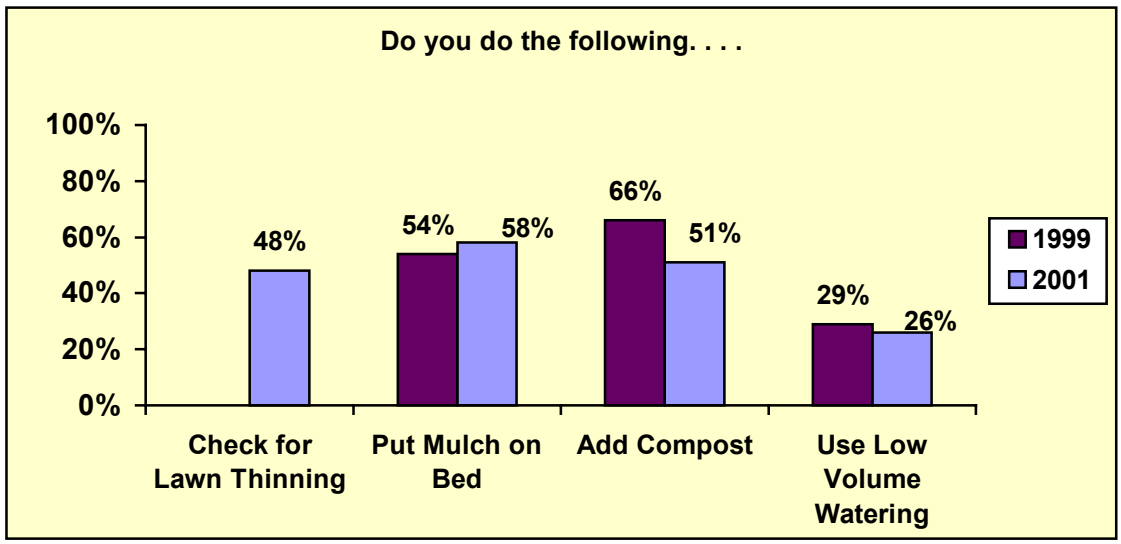
Do you Q69. Check your lawn for thin areas, compacted soil, and thatch? Q71: Mulch your planting beds? Q72: Add compost to your soil? Q73: Use low volume watering methods?

Eligible respondents were asked a series of questions about the methods they use to care for their lawns and gardens (see **Figure 71** below). Each of these methods helps promote a healthy lawn or plants, and is environmentally responsible.

Just half of those with lawns (48%) report they check for thinning and thatching. Over half (58%) say they mulch their garden beds. Half (51%) add compost at least once a year to their gardens. And about a quarter use low volume watering systems (26%). Differences do not exist between Seattle and Purveyor customers.

Across time comparisons show that not much progress is being made with these practices: mulching and low volume watering remain at about the same level, and adding compost appears to have gone down. No differences between Seattle and Purveyor customers surfaced across time.

Figure 71: Lawn and Garden Care Behaviors



Q74: Do you know what a Soaker Hose is? Q75: Did you hear about the Soaker Hose Rebate?

Seattle and Purveyor utilities sponsored a program in May and June of 2001 to encourage gardeners to purchase and install soaker hoses**. Figures 72 and 73** show that most people know about soaker hoses (84%), but that most did not recall the soaker hose rebate (78%). Data show that knowledge levels are the same across Seattle and Purveyor customers, but that significantly more Seattle than Purveyor customers knew about the rebate event.

Figure 72: Knowledge of Soaker Hoses

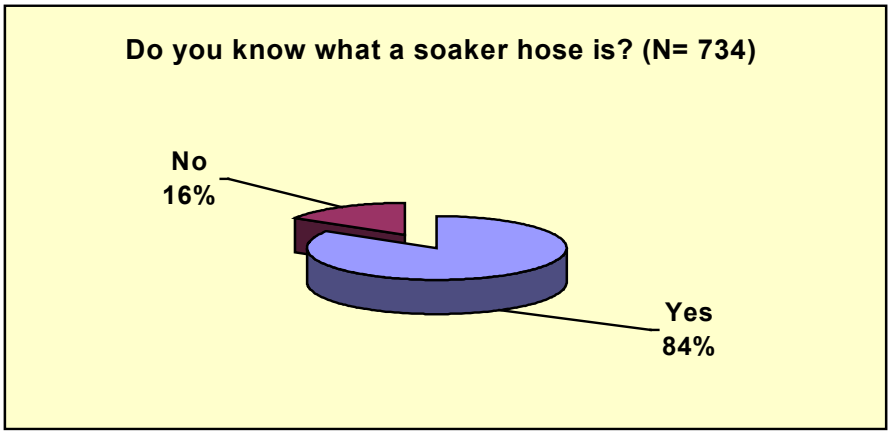
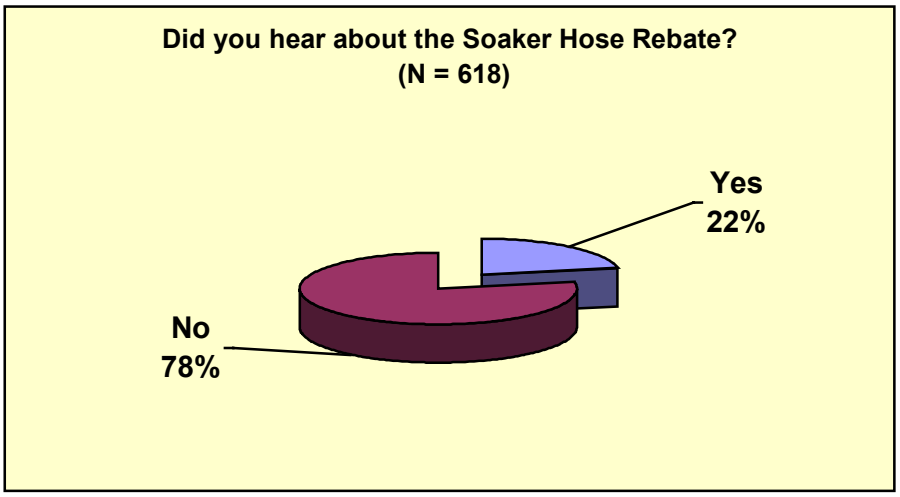


Figure 73: Awareness of Soaker Hose Rebate



Seattle-Purveyor Comparison *Sig. = <.05*		Seattle %	Purveyor %
Yes		27	19
No/DK		73	81
	N=	*287*	*326*

Q76: If you purchase plants, where do you shop for them? Q77: If you purchase garden supplies such as fertilizer, compost, or pest control products, where do you shop for them?

As shown in the **Table 11** below, about half of consumers shop at a retail nurseries or garden centers, and half shop at a hardware/housewares stores, when they need plants. A small proportion shop at wholesale nurseries for plants (11%). For garden supplies, however, consumers are much more likely to go to a hardware/ housewares store (67%) than a nursery (27%). Seattle and Purveyor customers do not shop at different types of outlets for either plants or garden supplies.

Table 11: Sources of Plants and Garden Supplies

Source (Multiple responses allowed total can equal more than 100%)	**Plants**	**Garden Supplies**
	%	**%**
Do not purchase	9	11
General hardware, housewares store	50	66
Retail nursery, garden center	49	27
Wholesale nursery, garden center	11	-
Grocery store	5	3
Other	4	4
DK	4	3
N=	*734*	*734*

APPENDIX A – QUESTIONNAIRE

ENTER WHETHER THIS IS A SEATTLE SAMPLE OR A PURVEYOR SAMPLE

SEATTLE SAMPLE 1
PURVEYOR SAMPLE .. 2

Hello, my name is_____and I'm conducting a survey on behalf of Seattle Public Utilities about your water supply. Your opinions will help Seattle Public Utilities communicate better with you about water issues. Your advice is very important to us and your answers will be kept completely confidential. Is now a good time to complete this survey? (IF NO ASK) May I call you back at a more convenient time?

Call Back - Appointment 01
Call Back - No Appointment 02
Respondent Not Available 03
Refusal to Continue 04
SCREEN OUT: Under 18 yrs old .. 05
Communication Barrier 06
Continue Survey 07

Hello, my name is_____and I'm conducting a survey on behalf of your local water utility about our water supply. Your opinions will help your local water utility communicate better with you about water issues. Your advice is very important to us and your answers will be kept completely confidential. Is now a good time to complete this survey? (IF NO ASK) May I call you back at a more convenient time?

Call Back - Appointment 01
Call Back - No Appointment 02
Respondent Not Available 03
Refusal to Continue 04
SCREEN OUT: Under 18 yrs old .. 05
Communication Barrier 06
Continue Survey 07

Does your household get its water from a private well or from a water utility?

Private well ..1
Water utility .. 2

THIS SURVEY IS A SCREEN OUT (NOT A UTILITY CUSTOMER). PRESS ENTER TO CONTINUE.

~~Could you tell me what zip code your residence is in?~~

98001 01
98002 02
98003 03
98004 04
98005 05
98006 06
98007 07
98008 08
98011 09
98012 10
98014 11
98019 12
98020 13
98026 14
98027 15
98028 16
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98101 32
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98119 46
98121 47
98122 48
98125 49
98126 50
98133 51
98134 52
98136 53
98144 54
98146 55
98148 56
98155 57

98166 58
98168 59
98177 60
98178 61
98188 62
98198 63
98199 64
OTHER ..65

THIS SURVEY IS OVER QUOTA: CLOSED ZIP CODE. PRESS ENTER TO CONTINUE.

_____

_

Q1. First, I'd like to ask about your views on some water and environmental issues. How concerned are you that your community may face major water supply problems over the next five years? Would you say you feel very concerned, somewhat concerned, not too concerned or not at all concerned?

Very concerned	1
Somewhat concerned	2
Not too concerned	3
Not at all concerned	4
DON'T KNOW/REFUSED ..	5

Q2. Why do you say that you feel && about water supply problems? (DO NOT READ LIST BUT PROBE FOR ANSWERS; ALLOW UP TO 5 RESPONSES)

Drought or water shortage	01
Terrorists could attack water supply	02
Population growth/over development	03
Limited water supply/"we only have so much water ..	04
Rising rates or bills/rates could go up	05
Salmon/fish specific concerns	06
Environmental concerns or quality of life in the NW ..	07
Water quality/Health	08
Conservation not pursued enough	09
Utility Management a problem	10
Water is essential/necessary	11
Media says it's a problem	12
Enough water, not a problem	13
Trust Utilities to run system well	14
OTHER (SPECIFY)	15
DON'T KNOW/REFUSED	16

Q2. OTHER (SPECIFY)

_____

_

_____

_

Q3. Do you believe the actions of individual households like yours can (1) greatly affect whether we have enough water to meet the future demands of our region; (2) somewhat affect whether we have enough water, or have little effect on whether we have enough water?

Greatly affect water supply	1
Somewhat affect water supply	2
Have little effect on water supply ..	3
DON'T KNOW/REFUSED	4

Q4. How important is it for your household to actively conserve water? Would you say...

Very important	1
Somewhat important	2
Not too important	3
Not at all important	4
DON'T KNOW/REFUSED ..	5

Q5. Compared with the amount of water your household used two years ago, do you think you use less water now, use about the same water, or more water?

Uses Less	1
Uses about the same	2
Uses more	3
DON'T KNOW/REFUSED ..	4

Q6. How much do you think your household has reduced its use over the past two years? Would you say you've reduced your use a great deal, say 10% or more; reduced your use somewhat, say, 5 to 10%; or reduced your use a little, say 1 to 5%?

Reduced a good deal - say 10% or more. ..	1
Reduced somewhat - say 5 to 10%	2
Reduced a little - say 1 to 5%	3
DON'T KNOW/REFUSED	4

Q7. Thinking about how you use water both indoors and outdoors, how much more could you reduce your household's water use? Realistically, do you think your household could..

Reduce its use by 10% or more ..	1
Reduce its use by 5 to 10%	2
Reduce its use by 1 to 5%	3
Not reduce its use	4
DON'T KNOW/REFUSED	5

Q7a. Did you know that if you reduce your water use that your sewer bill might also go down?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q7b. Would you say you agree strongly, agree somewhat, disagree somewhat or disagree strongly with the following statements: To me, conserving water at home means I will have to give up some of the things I enjoy. Would you say you ... ? (READ LIST)

Agree Strongly	1
Agree Somewhat	2
Disagree Somewhat	3
Disagree Strongly	4
DON'T KNOW/REFUSED (DO NOT READ) ..	5

Q7c. To me, conserving water at home means I will need to use water more efficiently to enjoy the same things I do now. Would you say you ... ? (READ LIST)

Agree Strongly	1
Agree Somewhat	2
Disagree Somewhat	3
Disagree Strongly	4
DON'T KNOW/REFUSED (DO NOT READ) ..	5

Q8. Are you aware that local water utilities provide water conservation information and services to their customers?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q9. How important is it to you that local water utilities provide these conservation information and services? Would you say it's ... (READ LIST)

Very important	1
Somewhat important	2
Not too important	3
Not at all important	4
DON'T KNOW/REFUSED (DO NOT READ) ..	5

Q10. How satisfied are you with the water conservation information and services that local water utilities provide? Would you say you're ... (READ LIST)

Very satisfied	1
Somewhat satisfied	2
Not too satisfied	3
Not at all satisfied	4
DON'T KNOW/REFUSED ..	5

Q11. In our area, salmon and people depend on the same rivers for water. How likely would you be to take steps to reduce your water use at home if you knew both salmon and people would continue to have enough?

Very likely	1
Somewhat likely	2
Not too likely	3
Not at all likely	4
DON'T KNOW/REFUSED ..	5

Q12. Most households can take cost-effective steps to reduce their water and sewer bills by 5-10%. How likely would you be to take steps to reduce your water use at home if you knew you would save 5-10% on your water and sewer bills? Would you say....

Very likely	1
Somewhat likely	2
Not too likely	3
Not at all likely	4
DON'T KNOW/REFUSED ..	5

Q13. Our region can delay the need for new and costly water sources if every household reduced its water use. How likely would you be to take steps to reduce your water use at home if you knew it would delay the need for new and costly water sources? Would you say...

Very likely	1
Somewhat likely	2
Not too likely	3
Not at all likely	4
DON'T KNOW/REFUSED ..	5

Q14. Water is important to protecting the environment now and for future generations. How likely would you be to reduce your water use at home if you knew it would protect our environment now and for the future? Would you say....

Very likely	1
Somewhat likely	2
Not too likely	3
Not all likely	4
DON'T KNOW/REFUSED ..	5

Q15. We've just talked about four reasons you might want to reduce your water use at home. The reasons are: 1) Reducing use so both salmon and people continue to have enough; 2) Reducing use to save on water and sewer bills; 3) Reducing use to delay the need for new, more costly water supplies; 4) Reducing use to help protect the environment now and for the future. Which of these reasons is the single most important one for you? (DO NOT ALLOW MULTIPLE RESPONSES - PROBE FOR MOST IMPORTANT REASON)

Reducing water use so salmon and people both have enough	1
Reducing water use to reduce water and sewer bill	2
Reducing water use to delay cost of new water supply	3
Reducing water use to protect the environment now and future ..	4
None are important	5
DON'T KNOW/REFUSED	6

Q16. Are you aware that Seattle and King County had a drought alert this summer?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

~~Q16a. Just so you know, the drought alert is now over. (PRESS ENTER TO CONTINUE)~~

Q16b. Just so you know, we did have a drought alert this summer and that the alert is now over. (PRESS ENTER TO CONTINUE)

Q17. I now have some questions about how you might have reduced water use inside your home. During the past two years, have you reduced water use by using your faucets less? For example, you might be turning off the water more often when you brush your teeth, when shaving, or doing kitchen clean-up?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q18. In the past two years, have you identified any leaks in your faucets?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q19. Have you had to chance to fix the leaks you found?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q20. Do you recall receiving a Conservation Kit from Seattle City Light or Puget Sound Energy that included, among other things, a faucet aerator and a plastic bag that you could use to measure the rate of water flowing through your showers and sinks?

Yes	1
No	2
DON'T KNOW REFUSED ..	3

Q21. Did you install the faucet aerator?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q22. Did you check the rate of water flow in your showers or sinks with the plastic flow bag?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

~~Q23. How long do most showers in your household last? Would you say less than 5 minutes, 5 to 10 minutes, or more than 10 minutes?~~

Less than 5 minutes	1
5-10 minutes	2
More than 10 minutes	3
It varies	4
DON'T KNOW/REFUSED ..	5

Q24. During the past summer, did you or others in your household regularly shorten your shower time by one minute or more?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q25. Did you or others shorten your showers due to the drought alert?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q26. How many people in your household shortened their shower times?

One 01	
Two	02
Three 03	
Four 04	
Five 05	
Six 06	
Seven 07	
Eight 08	
Nine or more	09
DON'T KNOW/REFUSED ..	10

Q27. Now that the drought is over, how likely will you or others continue to take shorter showers? Would you say ... ? (READ LIST)

Very likely	1
Somewhat likely	2
Not too likely	3
Not at all likely	4
DON'T KNOW/REFUSED ..	5

Q28. How many toilets do you have in your home?

1	1
2	2
3	3
4 or more	4
DON'T KNOW/REFUSED ..	5

Q29. In the past two years, have you checked any of your toilets for leaks?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q30. Did you find any leaky toilets?

Yes	1
No	2
DON'T KNOW/REFUSED	3

Q31. Did you have a chance to fix the leaky toilet, did you replace the toilet, or have you not had a chance to fix the toilet?

Fixed the toilet	1
Replaced the toilet	2
Did not fix the toilet	3
DON'T KNOW/REFUSED	4

Q32. In the past two years, how many toilets have you replaced or installed new? (IF NEEDED) That would be from the end of 1999 to the present.

None	1
1	2
2	3
3	4
4 or more	5
DON'T KNOW/REFUSED	6

Q33. How satisfied are you with the toilet(s) you've installed in the past 2 years?

Very satisfied	1
Somewhat satisfied	2
Not too satisfied	3
Not at all satisfied	4
DON'T KNOW/REFUSED	5

Q34. Within the next two years, how likely will you be to replace a toilet in your home? Would you say ... ? (READ LIST)

Very likely	1
Somewhat likely	2
Not too likely	3
Not at all likely	4
DON'T KNOW/REFUSED (DO NOT READ)	5

Q35. What is the main reason you will replace a toilet? (DO NOT READ. CODE ALL THAT APPLY)

Remodeling/updating	01
Save on water use	02
Save on water bill	03
Toilet not working	04
OTHER (PLEASE SPECIFY)	05
DON'T KNOW/REFUSED	06

~~Q35. (WHAT IS THE MAIN REASON YOU WILL REPLACE A TOILET?) SPECIFY OTHER~~

_____

Q36. How likely would you be to spend $100 to $200 to replace a working toilet in your home with a low flow toilet, if you knew you could save that much money in just a few years, through lower water and sewer bills?

Very likely	1
Somewhat likely	2
Not too likely	3
Not at all likely	4
DON'T KNOW/REFUSED (DO NOT READ) ..	5

Q37. This summer your water utility sponsored two events that they called "Toilet Round-Ups." During these events you could receive a $40 rebate for each high water use toilet you replaced with a low water use toilet. Did you by any chance hear about these Toilet Round-Up events?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q38. In your household, do you usually flush the toilet with every use, or do you often allow two or more uses before flushing?

Flush with every use	1
Allow two or more uses	2
DON'T KNOW/REFUSED ..	3

Q39. During the past summer, did you or others in your household flush at least one less time per day than usual?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q40. Did you flush less due to the drought alert?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q41. Now that the drought is over, how likely are you to continue to flush at least one less time per day?

Very likely	1
Somewhat likely	2
Not too likely	3
Not at all likely	4
DON'T KNOW/REFUSED ..	5

~~Q411. How often does your household wash full loads of dishes and clothes ? Would you say you wash full loads....~~

All of the time	1
Most of the time	2
Some of the time	3
Seldom or never	4
Don't Know/No Answer ..	5

Q412. During the past summer, did your household increase how often you washed full loads of dishes and clothes ?

Yes	1
No	2
Don't Know/No Answer ..	3

Q413. Did your household wash more full loads of dishes and clothes due to the drought alert ?

Yes	1
No	2
Don't Know/Refuse ..	3

Q414. Now that the drought is over, how likely will your household be to continue to wash full loads of dishes and clothes as often as you did during the summer? Would you say...

Very likely	1
Somewhat Likely	2
Not too likely	3
Not at all likely	4
Don't Know/No Answer ..	5

Q42. Have you heard of washing machines that are designed to save water and energy compared to standard washers? These washers usually load from the front instead of from the top.

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q43. Have you heard of the WashWise program that provides a cash rebate for utility customers that buy a qualified water and energy saving washer?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q44. In the past two years, did you buy a new washing machine? (IF NEEDED) Since the end of 1999.

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q45. Did you buy a washer designed to save water and energy, or a standard washer?

Washer designed to save water and energy ..	1
Standard/other type of washer	2
DON'T KNOW/REFUSED	3

Q46. Did you apply for a WashWise rebate?

Yes	1
No	2
DON'T KNOW/REFUSED	3

Q47. Without the WashWise rebate, how likely would you have been to purchase, at that time, the water and energy saving washer anyway? Would you say you would have been ... ? (READ LIST)

Very likely to purchase it anyway	1
Somewhat likely	2
Not too likely	3
Not at all likely	4
DON'T KNOW/REFUSED	5

Q48. Why did you decide on a &&?

_____

_____

Q49. Where would you most likely get information about appliances such as showerheads, toilets and washing machines? Would it be: (1) In newspaper articles, columns or ads; (2) At home improvement, hardware, or appliance stores; (3) In home improvement or consumer magazines and books; (4) From radio or TV shows or ads; (5) From your utility; (6) From friends, family or co-workers; (7) On the Internet; (8) Or from some other source?

Newspaper articles, columns or ads	01
Home improvement, hardware, appliance stores	02
Home improvement, consumer books and magazines	03
Radio/TV shows or ads	04
Utility	05
Friends, family, co-workers	06
On the Internet	07
OTHER (PLEASE SPECIFY)	08
None - do not get information on appliances	09
DON'T KNOW/REFUSED	10

Q49. (WHERE WOULD YOU BE MOST LIKELY TO GET INFORMATION ABOUT APPLIANCES SUCH AS SHOWERHEADS, TOILETS AND WASHING MACHINES?) SPECIFY OTHER

_____

Q50. During this past summer, did you usually ... ? (READ LIST)

Not wash your car	1
Wash your car at home	2
Go to a car wash	3
DON'T KNOW/REFUSED (DO NOT READ)	4

Q51. Did you go to a car wash due to the drought alert?

Yes	1
No	2
DON'T KNOW/REFUSED	3

Q52. Now that the drought is over, how likely are you to continue to use a car wash most of the time?

Very likely	1
Somewhat likely	2
Not too likely	3
Not at all likely	4
DON'T KNOW/REFUSED ..	5

Q53. Now I have some questions about how you use water outdoors. Do you have a yard?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q54. How would you rate your level of interest in gardening? Would you rate yourself as ... ? (READ LIST)

Very interested in garden or lawn care	1
Somewhat interested in garden or lawn care ..	2
Not too interested in garden or lawn care	3
Not at all interested in garden or lawn care	4
DON'T KNOW/REFUSED	5

Q55. Of the yard around your home that has lawn or garden, how much of it is lawn? Would you say you have ... ? (READ LIST)

No lawn	1
Up to 1/4 of the yard area is lawn	2
1/4 to 1/2 of the yard area is lawn	3
1/2 to 3/4 of the yard area is lawn	4
Over 3/4 of the yard area is lawn	5
DON'T KNOW/REFUSED (DO NOT READ) ..	6

Q56. In general, would you say the lawn around your home is more important than the garden areas, the garden areas are more important than the lawn, or both lawn and garden areas are equally important?

Lawn area more important	1
Garden area more important	2
Both lawn and garden are equally important ..	3
DON'T KNOW/REFUSED	4

Q57. how important is it for you to have a green lawn as part of your landscaping? Would you say it is ... ? (READ LIST)

Very important	1
Somewhat important	2
Not too important	3
Not at all important	4
DON'T KNOW/REFUSED (DO NOT READ) ..	5

Q58. In the past two years, have you removed any of your lawn?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q59. Was saving water one of the reasons you removed part of your lawn?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q60. Which of the following best describes how often you watered your lawn during this past summer? Would you say you ... ? (READ LIST)

Watered once a month or less	1
Watered about two times a month	2
Watered once a week	3
Watered every three days	4
Watered every other day	5
Watered everyday	6
DON'T KNOW/REFUSED (DO NOT READ) ..	7

Q61. Did you water your lawn less than usual due to the drought alert?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q62. Assuming that there is no drought next summer, when you water your lawn, how likely will you be to water at the same level as you did this summer?

Very likely	1
Somewhat likely	2
Not too likely	3
Not at all likely	4
DON'T KNOW/REFUSED ..	5

Q63. During this past summer when you watered your lawn, did you usually water your lawn during the evening and early morning hours?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q64. Did you change your lawn watering hours to these times due to the drought alert?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q65. Assuming there is no drought next summer, when you water your lawn, how likely will you be to water primarily during evening and early morning hours?

Very likely	1
Somewhat likely	2
Not too likely	3
Not at all likely	4
DON'T KNOW/REFUSED ..	5

Q66. Do you use an automatic sprinkler system to water your lawn?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q67. During the watering season, do you or anyone else adjust or reprogram the automatic system so that it waters less when it's cooler

and more when it's hotter?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q68. Do you or anyone else inspect your automatic system for leaks or other problems at least once a year?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q69. Do you check your lawn at least once a year for thin areas, compacted soil, or thatch buildup?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q70. Do you mostly maintain your own yard, mostly hire a professional yard service to maintain it, or do you do both?

Maintain myself	1
Use yard service	2
Do both	3
DON'T KNOW/REFUSED ..	4

Q71. Do you usually have mulch on your planting beds?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q72. Do you add compost to your soil at least once a year, either in new beds, on lawns, or on existing garden areas?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q73. Do you use any low volume watering methods in your garden such as drip irrigation?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q74. Do you know what a Soaker Hose is?

Yes	1
No	2
DON'T KNOW/REFUSED ..	3

Q75. Did you hear about the Soaker Hose rebate during May and June of this year, when you could have saved up to 50% on soaker hoses at selected nurseries?

Yes	1
No	2
DON'T KNOW/REFUSED	3

Q76. If you purchase plants for your garden, where do you shop for them most often? (DO NOT READ LIST, MULTIPLE RESPONSES ALLOWED)

Do not purchase plants	01
A general hardware/housewares store (Home Depot/Fred Meyer)	02
A retail nursery or garden center	03
A wholesale nursery or garden center	04
A grocery store	05
OTHER (PLEASE SPECIFY)	06
DON'T KNOW/REFUSED	07

Q76. (IF YOU PURCHASE PLANTS FOR YOUR GARDEN, WHERE DO YOU SHOP FOR THEM MOST OFTEN?) SPECIFY OTHER

_____

Q77. If you purchase garden supplies such as fertilizer, compost, or pest control products, where do you shop for them most often? (DO NOT READ LIST, MULTIPLE RESPONSES ALLOWED)

Do not purchase fertilizer or pest control products	01
General hardware/housewares store (Home Depot/Fred Meyer)	02
Nursery	03
Grocery Store	04
OTHER (PLEASE SPECIFY)	05
DON'T KNOW/REFUSED	06

Q77. (IF YOU PURCHASE GARDEN SUPPLIES SUCH AS FERTILIZER, COMPOST, OR PEST CONTROL PRODUCTS, WHERE DO YOU SHOP FOR THEM MOST OFTEN?) SPECIFY OTHER

_____

Q78. Finally, I have a few questions about your household to help us better interpret the opinions you've given us. As with all your answers in this survey, your responses are confidential. Do you live in a ... ? (READ LIST)

Single family home or a duplex	1
A building with three or more units	2
DON'T KNOW/REFUSED (DO NOT READ)	3

Q79. Would you say your lot is a ... ? (READ LIST)

Small city lot - less than 5,000 square feet	1
An average city lot - 5,000 to 10,000 square feet	2
A lot of one quarter to one half acre	3
OR a lot of more than 1/2 acre	4
DON'T KNOW/REFUSED (DO NOT READ)	5

Q80. Do you own or rent your own home?

Own	1
Rent/Lease	2
DON'T KNOW/REFUSED	3

Q81. How many people, including yourself, live in your household? (DON'T KNOW/REFUSED = 99)

OF PEOPLE IN HOUSEHOLD ..____

Q82. Which of the following categories best describes your age?

Under 18	1
18 - 24	2
25 - 34	3
35 - 44	4
45 - 54	5
55 - 64	6
65 or older	7
DON'T KNOW/REFUSED ..	8

Q83. How would you describe your racial or ethnic heritage?

White/Caucasian	01
Black/African American	02
Asian/Pacific Islander	03
Native American Indian Eskimo/Aleut ..	04
Latino/Hispanic	05
Mixed racial/ethnic heritage	06
OTHER (PLEASE SPECIFY)	07
DON'T KNOW/REFUSED	08

Q83. (HOW WOULD YOU DESCRIBE YOUR RACIAL OR ETHNIC HERITAGE?) SPECIFY OTHER

_____

Q85. Which of the following best describes your total household income before taxes for 2000?

Less than $15,000	1
$15,000 to just under $25,000	2
$25,000 to just under $50,000	3
$50,000 to just under $75,000	4
$75,000 to just under $100,000 ..	5
$100,000 or more	6
DON'T KNOW/REFUSED	7

Finally, my supervisor sometimes calls back to ensure that I asked all the questions correctly. For this reason only, may I have your name? (IF HESITANT) May I have your initials?

_____

I also want to confirm that I dialed the correct number? Is this ... ? (READ NUMBER FROM SAMPLE AND ENTER IT - NO PUNCTUATION)

_____

Those are all the questions I have for you today. Thank you very much for your participation. RECORD RESPONDENT GENDER

Male 1
Female ..2

ENTER INTERVIEWER ID#

INTERVIEWER # 1	01
INTERVIEWER # 2	02
INTERVIEWER # 3	03
INTERVIEWER # 4	04
INTERVIEWER # 5	05
INTERVIEWER # 6	06
INTERVIEWER # 7	07
INTERVIEWER # 8	08
INTERVIEWER # 9	09
INTERVIEWER # 10 ..	10
INTERVIEWER # 11 ..	11
INTERVIEWER # 12 ..	12
INTERVIEWER # 13 ..	13
INTERVIEWER # 14 ..	14
INTERVIEWER # 15 ..	15
INTERVIEWER # 16 ..	16
INTERVIEWER # 17 ..	17
INTERVIEWER # 18 ..	18
INTERVIEWER # 19 ..	19
INTERVIEWER # 20 ..	20
INTERVIEWER # 21 ..	21
INTERVIEWER # 22 ..	22
INTERVIEWER # 23 ..	23
INTERVIEWER # 24 ..	24
INTERVIEWER # 25 ..	25
INTERVIEWER # 26 ..	26
INTERVIEWER # 27 ..	27
INTERVIEWER # 28 ..	28
INTERVIEWER # 29 ..	29
INTERVIEWER # 30 ..	30

ENTER DISPOSITION CODE

----------	01
----------	02
----------	03
----------	04
----------	05
----------	06
Complete	07
Terminate Midway	08
Over Quota - ZIP Code	09
Screen Out - Doesn't Have a Water Utility - Has a Well ..	10